

The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

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WITH SUPPLEMENT. PRICE FIVEPENCE. PER ANNUM, BY POST, £1 4s.

MR. JAMES CROFTS, STOCK AND SHARE BROKER,

No. 1, FINCH LANE, CORNHILL, LONDON, E.C.
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Every description of British and Foreign Stocks and Shares bought and sold. Business negotiated in shares not having a general market value.
SPECIAL BUSINESS IN COLLIERY AND IRON SHARES.
SPECIAL BUSINESS IN FORTESCUE (Tin). Reliable advice given to shareholders in this company.
UNITED BITUMINOUS COLLIERIES shares are recommended to investors. During the past year 20 per cent. has been earned; the past year 40 per cent. expected, as collieries, coke ovens, &c., are now in full work.
FOR SALE, very cheap, 10 L.X.L. shares, fully paid; and 50 Eschequer (Gold).

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44, THREADNEEDLE STREET, LONDON, E.C., has FOR SALE the following SHARES, free of commission:—
20 Ashton, £23½. 30 Flagstaff, £3 11s. 3d. 25 Pennerley, £2 3s. 9d.
100 Aberdunant, 6s. 3d. 50 Grogwinion, 50 Rica (Gold), 11s. 9d.
30 Birdseye Creek, £2 18s. 30 Great Vor, £2½. 30 Richmond, £8½.
100 Bampfyde, 25 Hingston Down, 33s. 9d. 50 Rookhope, 21s. 3d.
100 Boscawell Downs, 10s. 6d. 30 Ladywell, £2½. 10 Roman Gravel, £17½.
50 Bog, 18s. 50 Last Chance, 32s. 6d. 25 South Rooker, £2.
25 Cedar Creek, £2½. 100 Malpas, 21s. 9d. 20 Sweetland, £5½.
15 Cape Copper, £2½. 50 Marke Valley, 19s. 9d. 10 Wh. Grenville, £6¾.
40 Colorado Terrible, 100 Minera, 50 S. Roman Grav., 19s.
100 Chontales, 17s. 6d. 100 Malabar, 13s. 6d. 75 Tylwyd, 50.
75 Cle Hill Colliery, 16s. 3 40 N. Quebrada, £4 1s. 3d. 100 Tecoma, 27s. 6d.
25 Drake Walls, 50 New Pacific, 8s. 3d. 40 Utah, 33s.
50 Don Pedro, 13s. 6d. 50 New Dolcoath, 23s. 9d. 50 Van Consoles, £3 18s. 9.
10 East Lovell, £9½. 60 Old Treburgett (10 per cent. pref.), 18s. 9d. 25 W. Tankerville, £2½.
50 East Van, 35s. 50 Penstruthal, 20s. 100 West Maria, 4s.
25 East Caradon, 22s. 100 Perkins Beach, 7s. 9d. 100 West Maria, £6¾.
40 Emma (Silver), £3 12s. 9d. 100 Prince of Wales, 6s. 9d. 30 W. Mary Hutch, £3 3s. 9.
35 Eberhardt, £4½. 100 Plymmon, 6s. 6d. 50 W. Esqair Lie, £3 3s. 9.
60 Frontino, 100 Plymmon, 6s. 6d. 50 W. Esqair Lie, £3 3s. 9.
London Office of Reference for Drake Walls and South Rooker Mines.
W. H. B. transacts business in every description of stocks and shares at the best market prices, and free of commission.
Bankers: National Provincial Bank of England, E.C.

MR. E. J. BARTLETT, STOCK AND SHARE DEALER,

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INVESTMENTS FOR 1874—A SAFE SELECTION.

Published by E. J. BARTLETT.
30, Great St. Helen's, London, E.C.

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FERDINAND R. KIRK, STOCK BROKER,

5, BIRCHIN LANE, E.C.
UNITED BITUMINOUS COLLIERIES will pay 40 per cent., and form a large reserve fund. The output is increasing, and will increase. Fire-bricks now costing 20s. are selling at 60s. by the thousand. A million tons exists of this clay. Early application necessary to secure shares.
SPECIAL BUSINESS in Tecoma, Flagstaff, Cardiff, Tylwyd, Wedgwood, Cedar Creek, Darlington, Welsh Freehold Coal, Whitehaven Iron, Richmond, and every description of Colliery and Iron Shares.
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Every information respecting Railways, British and Foreign Stocks, Mines, &c., will be furnished free by post or on application.
Price-List daily. Bankers: Alliance Bank.

MR. HENRY MANSELL, STOCK AND SHARE DEALER,

14, GREAT WINCHESTER STREET, LONDON, E.C.
H. M. recommends the purchase of COLORADO TERRIBLE shares.

MR. THOMAS THOMPSON, JUN., 1, PALMERSTON

BUILDINGS, BISHOPSGATE STREET, LONDON, E.C.
Some valuable hints as to the purchase of mining shares will be found in Mr. Thompson's "Investment Circular" for January now ready, post free, price 6d.

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We advise immediate application and purchase of the BAMPFYDE and LLANRWST shares. A rise in price is inevitable.

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29, BISHOPSGATE STREET WITHIN, LONDON, E.C. (Established 18 years), have FOR SALE the following SHARES at prices annexed:—
100 Aberdunant, 20 Polrose, £4. 20 Prince of Wales, 6s. 9d.
50 All-y-Crib, 11s. 6d. 25 Eberhardt, £4. 50 Pennerley, £2 13s.
25 Ashton, £2 18s. 25 East Van, 29s. 9d. 5 Providence, £8½.
50 Almada, 16s. 3d. 100 Fortescue, 8s. 3d. 30 Perkins Beach, 8s.
30 Bog, 23s. 50 Flagstaff, £3 13s. 9d. 20 Rosewall Hill, 19s. 9d.
75 Boscawell Downs, 100 Gold Run, 4s. 6d. 5 People's Colliery, 20s.
10 Blakeley Hall Colliery (£25 pd.), £22 10s. 10 Great Vor, £2 2s. 6d. 30 Richmond, £6 3s. 9d.
50 Bampfyde, 10 Great Laxey, £13 8s. 9d. 15 Roman Gravel, £17½.
40 Birdseye Ck., £2 18s. 9d. 30 Great West Van, 25 Rookhope, 20s. 3d.
10 Bayse, par. 30 Hop and Malt Exchange (offer wtd.).
60 Blue Tent, £4½. 30 Hingston, 32s. 9d. 5 Herodfoot, £5 3s. 9d.
75 Chontales, 19s. 9d. 35 Llanrwst, 1 South Caradon, £9¾.
100 Catherine and Jane, £4 10s. 3d. 15 Lovell, 100 So. Tolcarne, 13s. 3d.
75 Cwm Eian, 3s. 30 Ladywell, £3 3s. 6d. 75 Last Chance, £1 10s.
40 Cedar Creek, 42s. 75 Medlyn Moor, 12s. 6d. 30 Marke Valley, 20s.
5 Cape Copper, £29 8s. 9d. 30 Marke Valley, 20s. 25 Malpas, 18s.
3 Carn Brea, £5½. 25 Maughold Hd., £1 18s. 9d. 50 Newfoundland (offer wanted).
5 Cook's Kitchen, £11½. 50 North Pool, 21s. 30 New Quebrada, £4 2s. 6.
50 Colorado, £4½. 50 East Basset, £10½. 50 New Rosario, 18s. 9d.
100 Cle Hill Coll., 16s. 9d. 10 East Pool, £9½. 70 New Rosario, £2 18s. 9d.
30 Don Pedro, 3s. 6d. 3d. 30 East Basset, £10½. 70 New Rosario, £2 18s. 9d.
15 Dylife, £6 19s. 50 East Basset, £10½. 70 New Rosario, £2 18s. 9d.
3 Dolcoath, £20½. 50 East Basset, £10½. 70 New Rosario, £2 18s. 9d.
5 East Basset, £10½. 50 East Basset, £10½. 70 New Rosario, £2 18s. 9d.
10 East Pool, £9½. 50 East Basset, £10½. 70 New Rosario, £2 18s. 9d.
30 E. Liangnyon, 13s. 70 New Rosario, £2 18s. 9d. 15 No. Croft (offer wtd.).
25 Emma, £3 13s. 9d. 75 New Pacific, 50 Old Treburgett, 19s. 3d.
75 East Chiverton, 25s. 50 Old Treburgett, 19s. 3d. 30 Wh. Chiv., £3 3s. 9d.
50 East Grenville, 8s. 3d. 50 Old Treburgett, 19s. 3d. 30 Wh. Chiv., £3 3s. 9d.
50 East Soton, 5s. 3d. 50 Old Treburgett, 19s. 3d. 30 Wh. Chiv., £3 3s. 9d.

MR. GEORGE BUDGE, STOCK AND SHARE DEALER,

No. 4, ROYAL EXCHANGE BUILDINGS, LONDON, E.C. (Established 24 years), is a SELLER at net prices of:—
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BUYER of 7 Tincroft; 100 Birdseye Creek; 60 Penstruthal; 75 West Esqair Lie; 50 Van Consoles; 15 Cook's Kitchen; 200 South Aurora.

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BY FRED. WM. MANSELL, BY SWORN BROKER.

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50 Australian, £2. 20 Great Vor, £1½. 60 Parys Mount, 7s. 9d.
35 Bog, 11s. 6d. 10 Great Laxey, £13. 70 Prince of Wales, 6s. 9d.
25 Bedford Unit., 17s. 6d. 25 Grogwinion, £3. 75 Plymmon, 6s. 6d.
50 Boscawell, 11s. 6d. 60 Gt. West Van, £2. 10 Roman Gravel, £17.
50 Chicago, £8½. 70 Gold Run, 4s. 9d. 30 Richmond, £6½.
50 Colorado, £3½. 50 Herodfoot, £4. 25 Rookhope, £1.
40 Cape Copper, £29½. 40 Cape Caron Brea, £3½. 50 So. Roman Grav., 19s. 9d.
10 Cook's Kitchen, £11½. 30 Ladywell, £3. 40 So. Roman Grav., 19s. 9d.
70 Cle Hill Coll., 14s. 9d. 20 Lovell, £2½. 20 St. Dennis Consoles, £2.
40 Cedar Creek, £2. 50 Last Chance, £1½. 20 Sweetland, £4½.
10 Dolcoath, £5½. 40 Marke Valley, 15s. 6d. 20 Tankerville, £9½.
80 Don Pedro, 12s. 70 Malpas, 18s. 9d. 10 Tincroft, £39.
25 Emma, £3½. 60 New Dolcoath, 50 Tecoma, £1½.
25 East Van, £2. 70 New Quebrada, £4. 30 Van Consoles, £3½.
20 Flagstaff, £2½. 70 New Pacific, 7s. 6d. 25 Wheel Crebor, £3½.
50 Frontino, 7s. 6d. 30 Pennerley, £2. 20 Wheel Tregos, £1.
35 Eberhardt, £4. 90 Old Treburgett, 18s. 6d. 10 Wh. Grenville, £8.
30 Frontino, £5½. 40 Old Batholes, 10s. 20 Wheel Mary.

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W. D. and Co. have FOR SALE the following at net prices:—

50 Aberdunant, 8s. 6d. 50 Fortescue, 7s. 20 So. Condurow, £4 17 6

50 All-y-Crib, 11s. 50 New Pacific, 6s. 5 Tankerville, £2 2s. 6d.

25 Bedford Unit., 17s. 50 New Rosewarne, 6s. 10 U. Bituminous, £1 1s

40 Boscawell, 10s. 6d. 10 Nant-y-Ricket, £8. 10 Wh. Grenville, £6 5s.

40 Cle Hill Coll., 16s. 10 No. Rosewarne, £2. 5 Wheel Kitty (St. Ag.), £9 5s.

5 Cook's Kitchen, £11 15 25 Lovell (Tin), £3 10s. 30 W. Gololphin, £3 5s.

30 Cwm Eian, 4s. 9d. 100 Rookhope Valley, £1. 30 W. Gololphin, £3 5s.

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20 Almada, 16s. 3d. 50 Flagstaff, £3 12s. 100 Prince of Wales, 6s. 9d.

100 Aberdunant, 6s. 100 Fortescue, 6s. 6d. 50 Rio Tinto, 50s.

35 All-y-Crib, 11s. 9d. 40 Gawton, 11s. 9d. 45 Rosewall Hill, 17s. 9d.

100 Bampfyde (off. wtd). 80 Great West Van, 39s. 6d. 45 Rookhope, 25s.

40 Bedford Unit., 20s. 20 Great Vor, £2 3s. 9d. 25 Richmond, £6 3s. 9d.

45 Birdseye, 59s. 100 Gold Run, 4s. 6d. 25 So. Roman Grav., 19s.

10 Bellavista, offer wtd. 35 Grogwinion, £2½. 25 So. Condurow, £4½.

50 Bog, 16s. 20 Great Laxey, £13½. 35 So. Carn Brea, £3 2s.

150 Boscawell Downs, 10s. 35 Hingston, 32s. 6d. 50 South Aurora, 15s. 9d.

50 Blue Tent, £4½. 20 Hudson's Bay, 45 Ladywell, £2½.

2 Carn Brea, £5½. 25 Last Chance, 31s. 3d. 30 Sweetland, £4 1s. 3d.

45 Colorado, £4 1s. 9d. 100 Throhm Hill Reef, 35s. 100 Throhm Hill Reef, 35s.

50 Chontales, 17s. 75 Malabar, 12s. 9d. 100 Tecoma, 28s.

60 Cwm Eian, 3s. 6d. 75 Malpas, 21s. 6d. 25 Tankerville, £9.

10 Cook's Kitchen, £11½. 30 Marke Valley, 17s. 6d. 20 Treleigh Wood, £9½.

70 Cedar Creek, 44s. 6d. 20 Maughold Head, 27s. 6d. 20 Trumpet, offer wtd.

60 Cle Hill Colliery, 16s. 85 New Pacific, 7s. 6d. 50 Utah, 31s.

3 Dolcoath, £49½. 100 New Dolcoath, 22s. 6d. 70 Van Consoles, £3 16s. 6d.

25 Devon Cons., 23s. 6d. 45 New Quebrada, 85 New Rosario, 18s.

5 East Basset, £10½. 5 Newfoundland (£10 paid), £2½.

40 East Grenville, 7s. 60 N.W. Rosewarne, 18s.

15 East Pool, 15 North Rosewarne, 15s.

15 East Van, 30s. 50 Old Ratholes, 12s. 6d.

45 East Soton, 5s. 100 Old Treburgett, 22s.

35 Eberhardt, £4 1s. 3d. 100 Old Treburgett, 22s.

40 Emma, £3 13s. 9d. 10 ditto preference, 19s.

55 Exchequer, 4s. 6d. 70 Perkins Beach, 7s. 6d.

100 Eschequer, 14s. 6d. 40 Pennerley, 43s.

70 Frontino, 6s. 6d. 100 Penstruthal, 19s.

Bankers: London and Westminster.

MR. CHARLES THOMAS,

MINING AGENT,
3, GREAT ST. HELEN'S, LONDON, E.C.

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Flagstaff. Gold Run. Buller.

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Cedar Creek. Malabar. West Esqair Lie.

Parties wishing to purchase or sell in the foregoing are requested to make application. PENNINGTON AND CO., SWORN BROKERS.

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Original Correspondence.

THE COAL FIELDS OF IRELAND.

When the Coal Famine was at its height, and a price fixed upon the commodity bearing no fair marketable comparison to its value, it occurred to many theorists in this country that our internal resources might be advantageously developed. Notably, in the North of Ireland, and in the county of Antrim more particularly, a commercial movement was set on foot, under promising auspices, to open the coal mines, which had been represented to contain mineral deposits fully equal to our home consumption. Eminent scientific men were invited to make surveys; the proprietors of the soil afforded every facility for the explorations. It was found—as, indeed, it had been frequently found—that a mine of wealth, approachably near the surface of the soil, was only awaiting the hand of enterprise to impart to it a value the importance of which cannot be estimated in figures. It has been said, and but too truly, that Ireland is a “dependent” nation; that we are relying upon a Golconda of wealth, and existing in penury. That we are too inert to apply the ordinary advantages at our command to bring forth and to perfect, in a commercial point of view, the fruits indigenous to the soil.

We read daily and yearly in the contemporary press of Great Britain of the vast and inexhaustible natural resources she commands—her Duke of Devonshire, her Lord Dudley, her Lord Lonsdale, and her other coal giants have amassed and are amassing fabulous wealth from the bare products of an embedded soil, which neither their ingenuity nor talent created. They are the representatives of princes of fortune; they are fair representatives of a self-reliable nation, which, bowing to the golden goddess, have made fortune fame, and upon that fame they have founded British precedence over every commercial country on record. But what is the fact? Figuratively speaking, with bread positively lying at our doors we refuse to stretch forth the hand and place it in the larder. We have coal, and coal enough with which to freight every vessel coasting from these shores; we have coal enough to drive the whole machinery of our northern capital of Belfast, and the equally great works of Dublin, Cork, and Waterford in which steam-power is applied. This coal, by accredited reports, is equal in its properties to the best Whitehaven, Wigan, or Raubon. Some specimens have been found in Co. Derry, equal to the productions of your celebrated Moira pits, Ashby-de-la-Zouch. One eminent engineer has certified, in a Governmental report, that the portion of ash to the substance raised is smaller by the proportion of 95 to 100 as against the best Whitehaven. Samples have been tried in fast running mills, in over-heated furnaces, and in domestic kitchen ranges, fully bearing out this conclusion.

The amount of this fuel at our command is variably estimated at 14,000,000 to 90,000,000 tons. The landed proprietors—absent though many of them are—have, through their agents, from time to time given free permission to geologists, and others taking a direct interest in the question, to carry out such preliminary explorations as circumstances might dictate. For the unearthing of the soil, the disturbance of both arable and pasture surface, no pecuniary demand was made. The Lord of Enniskillen himself, in reply to a favour asked of him, readily said, two years ago, “Take up my soil; sink any shaft you please. If you succeed, I shall then demand but a royalty of one shilling per ton.” Upon the faith of this most liberal offer, it occurred to Mr. Gray, of Belfast, to organise a company to give effect to this concession. Now, the facts were these:—For many years past coal has been found by the tenant proprietors of the soil so near to the surface that they had without difficulty burned it for their domestic purposes, as they did the wood they felled, or the peat they grew. In fact, the upshot of the coal was so readily within their grasp that they burned it with as little regard to economy as a bad housewife dispenses her store, and its value was underrated in proportion to the excess of supply. As I have said already, the fictitious dearth across the Channel again prompted us to look to our home supply. For nearly two years the “coal ring” here was an autocracy. They commanded their prices. Neither the protests of the press, nor the representations of manufacturers and the public, nor the pitiful, though silent, appeals of the necessitous reached the hearts, if it did the ears, of the usurious combination. It was at this juncture that Mr. Gray, backed by many Belfast merchants, convened a meeting at the beginning of 1872 in the Belfast Chamber of Commerce. At that meeting Mr. Mulholland presided. From his presidency great things were expected, for the great linen factory of which he is the head is a monument to the successful flux culture of this country in its more finished form. Mr. Gray stated upon well-weighed authority that pecuniary means only were needed to bring into the Belfast market such a home supply of coal as would remove from our cross-Channel navigation that great fret of coaling vessels upon which we depend. Upon the County Fermanagh property there was a pit opened so favourably that the sinking of a shaft was entirely unnecessary. He asked but for 200*l.* to enable him to give an impetus to his project. As an incentive to action, he stated that no charge would be made by him if the undertaking proved a failure. There were many monied men at that meeting—cotton lords and millionaires. They endorsed his views, they were complacent to a degree, but when a resolution was submitted asking for means three-fourths of those present vacated their seats as by a spasmodic visitation. The Chairman subscribed his name for a few pounds, the Mayor, with glowing and characteristic generosity, went as far as 5*l.*, and about half-a-dozen others, unsolicited of fame, went in for 30*s.*, be the same more or less: 200*l.* only was needed, but, tell it not in Gath, after the “begging” petition had run a paupered course of three months upon the tables of the Commercial News Room, in that great centre of northern enterprise something less than 30*l.* was subscribed. There is the coal; in the pockets of the capitalists is the money; in our thatched homes are the nerve, vigour, the bone and sinew of the country, but we lack that which has raised Great Britain to its present enviable altitude among nations. We are groaning under a plethora of wealth. As petted children at the Christmas table gorge and disgorge without a thought from what source their ill-digested luxuries come, or who has to pay the piper, or from whence the next overladen freight is to land, so we, in our voluntary idleness, beggar ourselves by our inaction. The sum of 200*l.* would have opened one of the richest mines in Ireland; 30*l.* only was promised—so much was not given. And still we allow a fleet of coal-laden vessels to import to us that which, if we had a proper spirit of enterprise in our veins, we could freely and advantageously dispense with. I am constrained to say that, after a tolerably world-wide experience, I have never met with such an *effete* community, universally or individually. An old adage represents a grey-haired man as cicerone to a tottering child—“Trot not fast or you may stumble.” We have not trotted fast, but we have stumbled. We have allowed, and are allowing, an extortionate country, whose motto is that of greed and gain, to traffic upon our sheer idleness, in order that the glory of a country upon which poets dilate as one upon which the sun never sets may be paraded before an admiring and contemplative world as a paragon of virtue, and of golden pre-eminence: 30*l.*! Mr. Gray! Mr. Mulholland! Belfast Chamber of Commerce! 90,000,000 tons of coal! a coal-starved population! a people with coal under their feet they will not unearth! an absent proprietary luxuriating upon the products from the earth, and with no further interest in the earth than that represented by a steward’s banking balance! a priesthood, well intentioned, moderately educated, subservient to a power which does not admit of a proper development of intellectual calibre! an export trade comprising two-thirds of the whole of the traffic between Great Britain and Ireland! an import trade second only to any commanded by a European maritime power. This is a picture underdrawn in every outline. Faith has been pinned upon Mr. Gladstone’s Liberal administration. It has not only been pinned, but stapled, with our repeal of the Land Laws, the fixity of tenure, the disestablishment of the Irish Church, disaffection prevails.

As with nations, so with individuals. We have not been taught the salutary lesson of self-support. Relying upon successive Governments for extraneous aid, we have—unwittingly though it may be—assumed the prostrate attitude of a suppliant, when self-respect,

if no higher motive, should have led us to appear in the armour of self-supporting knight-errants. A subsidised country is but one remove from pauperism: how long will the gallant Erin allow the stigma of “dependence” to disfigure the boldest outlines of her escutcheon? I write not in anger, but as one whose Celtic blood impels him to deplore the degeneracy of his country.

Incidental to this subject, Mr. J. M. Meadows, C.E., has just read a paper on the Leinster Coal Fields before the Geological Society. He directed attention to the Three-foot seam of coal forming the celebrated Kilkenny Coal Mines, which yielded a supply of from 13,000,000 to 14,000,000 tons, but had been exhausted about 25 years ago. Speaking of the supply of the future, he said the first workable had been ascertained to be the Jarow, or Four-feet, seam, and several workings had been opened upon it. It might be looked upon as the principal means of future supply.

The character of the seam was variable in thickness, the greatest depth being found in the interior. The seam below the Jarow was known as the “Rushes”; it had been worked in several parts, but was the least valuable in the district. An explanation was given of various strata intervening between the different seams, and allusion was made specially to the opinion of Sir Robert Griffiths’ report of the lecturer’s theory. The correctness of the conclusion arrived at was shown by diagrams of various portions of the field, and by comparison of the strata of Slieve Ardagh coal field. The present output from all the workings in the Leinster coal field was at the rate of 80,000 tons a year, while the position of 600 miners was far above that of the average of the agricultural labourers. The coal of all the fields was anthracite, or smokeless; it was used for milling and cornginding purposes. From the report of the Royal Commissioners the total quantity of coal in the district was estimated at 75,000,000 tons, 50,000,000 of which was of practical value.

Reference was made to the non-connection of the railway with the coal fields, which was considered as an essential to their efficient working. In the course of the discussion that followed the Chairman referred to the similarity in the stratification of the Leinster coal fields and the Lancashire and Welsh coal fields. He also deprecated the want of foresight in engineers who carried railways throughout this country in seemingly keeping away from the coal districts, which could be made so valuable. This had been done in absence of any expectation that coals would reach 40*s.* a ton.

PROMINENT PHASES OF NORTHERN METALLURGY.

Scarcely a week passes in which we are not called upon to chronicle some new phase of metallurgic industry. All who are employed, directly or indirectly, in this important trade appear to recognise the fact that there is no finality in improvement, and that the more progress we make in the direction of industrial economy the more clearly the long vista of economical possibilities in the future is exposed to our view. Given skill, patience, and perseverance, with ample and adequate facilities for trustworthy experiments, and there is no saying to what shape the pioneers of metallurgical progress may mould the future of that industry. It is admitted on all hands that there is unlimited scope for progression, that some of our metallurgical processes are crude and improvident, and that England’s industrial future must to a large extent be governed by the new economies which are brought into operation. It is cheering to find that never was the practical acknowledgment and appreciation of this fact so wide spread and undisputed as at the present time. Progress is the watchword of the masters, the oriflame of the workmen, the goal of the man of science. It is not to be wondered at that there should be such a remarkable activity in the metallurgical arts when we consider the scope that they afford for the rapid acquisition of riches. It is true that some of the greatest apostles of metallurgical science have not in their own lives reaped the reward of their labours. HENRY CORT, “the father of the British iron trade,” died in comparative poverty, after spending all his fortune in carrying out the improvements with which his name is associated. ROGERS, the inventor of the iron bottoms that were the means of introducing a new era in the manufacture of finished iron, died in poverty and neglect, and even when an appeal was made to the iron trade on behalf of his widow the response was utterly inadequate. But, on the other hand, the inventions of NELSON, who substituted hot-blast for cold in the manufacture of crude iron, and of BESSEMER, whose process resulted in reducing by more than one-half the cost of steel rails and plates, secured for each of them a splendid fortune. Examples of this kind afford encouragement to those who, it may be in the midst of ridicule and obliquity, are seeking to alter the old order of things, to persevere in such efforts as are founded on sound principles and admitted possibilities of improvement.

In the Cleveland district there are at the present time several important metallurgical improvements under trial and investigation. In their order they may be thus summarised:—1, the DANKS’ system of rotary puddling; 2, the utilisation of blast-furnace slag; 3, the use of peat for metallurgical purposes; 4, the economy of coke; and 5, the purification of cast-iron. It may be interesting to review the stages by which each of these improvements have attained to their present perfection, and to consider, as far as we can, what remains to be done in the future.

1.—As regards Mr. DANKS’ system of rotary puddling, it appears to many men not wilfully prejudiced that it has been little else than a flash in the pan. If it is remembered that when the patentee read his paper before the Iron and Steel Institute in 1871 there was a profound sensation created among iron manufacturers all over the country; that when Mr. DANKS came into the Cleveland district he held many interviews with the ironmasters, each of whom seemed more anxious than the others to adopt the new process; that an arrangement was made with Mr. DANKS by the Cleveland Ironmasters’ Association, whereby he was to receive 50,000*l.* for the patent rights of 200 of his furnaces; that it was afterwards agreed to charge 250*l.* for the patent rights of each furnace, and 2*s.* per ton royalty on the iron produced; that the Commissioners appointed to go to America, and report upon Mr. DANKS’ system to the Iron and Steel Institute, declared it to be all but perfect; and that the first experimental trials with one of Mr. DANKS’ rotary machines at the Tees Side Ironworks, Middlesbrough, were pronounced to be most satisfactory—when all this is remembered it seems a most unaccountable thing that the rotary system of puddling has made so very little progress. It is only in operation at two works in the Cleveland district—those of the Erimus Iron Company and the North of England Industrial Iron and Coal Company. Its results at these establishments have been kept as secret as they possibly could, and any reports on the system that have found their way into print have been declared to be unauthorised. It is no secret, however, that in some important essentials the system has proved a failure, and it is rumoured in the Cleveland district that it has given so much vexation and trouble to those who have adopted it that they have now and again seriously contemplated its abandonment. This may or may not be true, but we are in a position to state authoritatively that Mr. DANKS’ furnaces at both of these works have produced excellent ball furnace iron and puddled bars. It has also been proved that by using molten metal brought direct from the blast-furnace there is an economy of fuel. The latter course cannot yet be adopted at any of the works where the system is in operation, but it is on the cards to construct a cupola on a new system, patented by Mr. THOMAS, of the Acklam Refinery, for the purpose of melting the iron before it is poured into the rotary furnace. Another source of difficulty arises from the lining or fettling of the furnace, which is liable to give way, thus causing great injury to the furnace, but by using molten metal this danger will be largely obviated. By the use of a combined squeeze and cutter or shear, patented by some gentlemen in Darlington, and exhibited in Middlesbrough for the first time this week, it will also be possible to secure “blooms” of a uniform size and weight, and suitable for ordinary rolls—a desideratum not hitherto supplied. Step by step, indeed, Mr. DANKS’ system is being rendered more perfect and practicable, and when at length it comes to be adopted in other parts of the kingdom the credit of having adapted it to the exigencies of the English iron trade will belong to the Cleveland district.

2.—The utilisation of blast-furnace slag is a subject upon which

much has recently been written, but not more, perhaps, than its importance warranted. A company has been formed in Middlesbrough for the purpose of working the combined patents of Mr. CHAS. WOOD, of Middlesbrough, and Capt. BOMBER, for the utilisation of blast-furnace slags. Mr. WOOD has already made about 12,000 tons of slag, all of which has been sold or made use of for building or concrete work at a considerable profit. But Mr. WOOD’s principal patent aims at the utilisation of slag for agricultural purposes by reducing it to slag sand. The rationale of this process is exceedingly simple. The slag flows from the furnace into a bath of water, varying from 2 to 3 ft. in depth. By the revolution of a cylinder in the machine, and buckets or screens attached to the inside, the water is kept in a state of violent agitation, and the liquid slag coming into contact with the agitated water is caught and scattered into sand. The cost of working this machine is as follows:—

| | |
|--|----------------------------|
| Make of furnace (say) | 25 tons of iron. |
| One man per day | 5 <i>s.</i> |
| 8000 gallons water, at 3 <i>d.</i> | 2 <i>s.</i> 6 |
| Wear of machine (say) | 5 <i>s.</i> = 12 <i>s.</i> |

Supposing, therefore, that 30 tons are converted into slag, it gives $12 \times 12 \div 30 = 4.8$, or nearly 5*d.* per ton. It is also found that by sinking the slag sand with lime an excellent mortar can be produced at 4*s.* 6*d.* per ton, whereas the commonest kind of mortar employed by builders does not cost less than 16*s.* per ton. In these two applications of this hitherto waste product there is undoubtedly scope for the creation of a large industry, of which we have only seen the commencement.

3.—The use of peat for metallurgical purposes has long been talked about, but except to a very limited extent it has not yet been realised, nor is there any very strong probability that so long as coke continues plentiful and reasonably cheap recourse will be had to our peat bogs as a source of fuel supply. It is, however, admitted that compressed peat, owing to its freedom from sulphur, is admirably adapted for metallurgical purposes, and the recognition of this fact was pressed upon the Cleveland engineers at their last meeting by Mr. C. E. BAINBRIDGE, of Middleton-in-Teesdale, who has established works for the compression of peat in South Durham. The only doubt about the matter is whether peat would prove as economical as coke. Mr. BAINBRIDGE thinks there would not be much difference in the present state of the coke market, and after making allowance for the cost of freight from the uplands of South Durham to the Tees-side district. In the North of England, and within 30 or 40 miles of the congeries of blast-furnaces situated around Middlesbrough, there are peat bogs of almost unlimited extent, and arrangements are now being made for compressing the peat so as to adapt it for use in the manufacture of iron, so that within a very short time we shall see the compressed peat of the moorland districts brought into competition with the coke of South Durham. If in this rivalry peat should run a winning race, then there will be increased hope for the future of the North of England iron trade, for it is calculated that the coal available for the manufacture of iron in Durham and Northumberland will become exhausted long before the ironstone contained in the Cleveland hills; and if by the partial use of peat it is found possible to prolong our supplies of fuel it will be all the better for succeeding generations.

4.—Closely allied to the subject we have just been considering is that of economy of coke. This is certainly no new phase of Northern metallurgy. It is one that has been under consideration for many years. But, while much has already been done, much, if not more, yet remains to be accomplished. Our ironmasters have reduced the proportion of coke required to make 1 ton of pig-iron from 35 to 23 cwt*s.*, but they have made no progress in the economy of coal in the coking oven. It is here that the economists must find their work in the future. In many cases the coal of South Durham does not yield more than 50 to 55 per cent. of coke, whereas it should yield at least 60 to 70 per cent. under more scientific treatment. Then, again, there has hitherto been little or no attempt made to utilise the waste heat of the coking ovens—a vast and prolific source of calorific power. It is probably no exaggeration to say that the heat wasted in the coking ovens of this country would be adequate, if properly directed, to actuate all the steam-engines in the kingdom. Coking ovens are, of course, generally erected in close proximity to collieries, and in places where no other forms or combinations of industry are carried on, and, therefore, it has been urged that the utilisation of this waste heat is only practicable for the manufacture of bricks, or for cognate processes that may be carried on as advantageously at one place as at another. But there is nothing to which the waste heat from coking ovens is so well adapted as the raising of steam; and wherever or for whatever purposes steam may be required the waste of calorific power may be utilised, and steam is so universally necessary that it is rarely possible, even in the most isolated districts, not to find uses for it. This, at any rate, appears to be a view that finds acceptance with not a few of our coke manufacturers in the North of England, who are now taking steps to economise this large source of waste. A number of patents for this purpose have lately been taken out, and two are in successful operation in South Durham. One of these is the patent of Mr. ALFRED JOHNSON, of Messrs. JOSEPH PEASE and PARTNERS; the other is that of Mr. JOHN MARLEY, of Darlington.

5.—Of the last item on our programme we are not now in a position to say more than a few words. It is acknowledged on all hands that the refining of the pig-iron of Cleveland would adapt that metal to be used for purposes for which it is not now suited, and more especially if it were possible to eliminate or reduce to something like a trace the phosphorus and sulphur which it contains, and which renders it altogether unsuited for the manufacture of steel. Attempts are now being made at one of the Tees-side works to refine the crude metal by a new process, which without any considerable extra cost will adapt it for the higher purposes of metallurgy. The process has not yet passed beyond an experimental stage, but it is pregnant with possibilities that may open up a much brighter future for the Cleveland district.

COAL MINING IN CHINA.—Some information upon this subject is given in an official report upon the trade of Tamsui, including Kelung, where coal abounds in great quantities. The system of working these mines—as indeed Chinese mines generally—is exceedingly primitive and imperfect. Places where the mineral is observed cropping out of the hill side are selected, and an opening 5 ft. high or more by 2 ft. wide is driven horizontally for a distance of some 40 yards, terminating in a central chamber, from which workings 100 yards or more in length radiate in a direction which usually inclines slightly upward. In these workings, which in many cases can only be entered on all fours, the miner carries on the work of excavation, squatting in mud and water, and breathing a most foul atmosphere. One mine usually employs about 12 or 15 miners, who earn wages equivalent to about 1*s.* 6*d.* a man per diem, which is an extremely high rate in China. The usual length of a day’s work is about 11 hours. The miner is armed with a pick shaped like a sledge-hammer, with one head pointed, and weighing about 6 lbs. The length of the iron head is about 8 in., and of the wooden shaft 2½ ft. The miners’ lamp is a saucer of oil, with a rush wick laid into it. The coal is drawn along the pit’s floor to the mouth in a basket about 3 ft. long, fastened on a board, and a rattan cord attached by which to haul. Occasionally the board is fastened with rollers, and travels on planks laid down for the purpose of forming a rudimentary tramway. In consequence of the imperfect tools employed great waste occurs through so great a quantity of the coal being reduced to a powder. The ventilation of the mine is left to itself, and it is stated that no system of pumping out the water is employed. The water runs out at the mouth of the mine, and in cases where the galleries take a downward direction the only resource left is to abandon the workings when the water excessively accumulates. Fire-damp is unknown, but accidents often happen from the sides and roof falling in, which, from the insufficient way in which they are secured is almost inevitable. Generally speaking, it may be assumed that the coal working at Kelung is little more than a mere scratching of the surface, and that the real coals beds may be considered to be practically untouched. The Chinese Government rather put drawbacks in the way of these mines than offer facilities for their working. The owner of land which contains coal is not permitted to open a mine without previously obtaining the sanction of the authorities, which involves great delay and expense, and is after all usually refused. As to the introduction of machinery for the better working of the mines, the proprietors have not sufficient capital to purchase such machinery, nor do they wish to do so. Supposing, however, that they were both able and willing, it is stated that such an innovation, accompanied as it would be by the employment of foreigners, would be the immediate signal for the closing of the mines by the mandarins, and the not improbable loss of the proprietor’s head. The quality of this coal has been favourably reported upon by competent engineers, and it is stated, in fact, upon good authority that for household purposes Kelung coal has no superior.

DRIVING BELT.—Mr. B. HOFFMARK, of St. Petersburg, has invented a new driving belt, which is composed of a series of links, each link consisting of wire formed into what may be termed a flat oval spiral. The links are connected together by transverse rods having hooks at their ends.

The Chapel-House Colliery Company

(LIMITED).

Registered under the Companies Acts, 1862 and 1867.

CAPITAL £140,000, IN 28,000 SHARES OF £5 EACH.

The property consists of the well-known Chapel-House Colliery, situated in the district of Skelmersdale, about 14 miles from Liverpool, and 4 from Ormskirk, and is held under various leases, the particulars of which may be seen at the offices of the company. There are 11 known seams, with an aggregate thickness of over 37 ft. of workable coal, seven of which extend under the whole of the royalty. The coal is of good quality, well known in Liverpool, and much liked; in fact, large purchases of coal have been effected in order to supply and keep together the customers, in anticipation of a larger output.

There is a very large plant, consisting of the necessary pits, machinery, stagings, stores, &c., 148 wagons, 26 flats or lighters, 3 schooners, and everything necessary for the carrying on a very large shipping trade; offices at Liverpool, and a wharf at Dublin; the whole being taken over by the company, with the goodwill of the business as a going concern.

The coal is easily worked, there being but little water, and consequently, no pumping machinery is required. There is neither gas nor noxious vapour, and the men work with naked candles.

The present output amounts to over 300 tons per day, but by the further sinking of the pits and the extension of the works this output can be increased to 1000 tons per day; when the profits should be in proportion; and even should coal depreciate in value, from the cheap rate at which the colliery can be worked, the shareholders will still possess a most valuable dividend property.

A balance-sheet, which has been audited by Mr. G. E. Holt, one of the first accountants in Liverpool, gives as profits for the three months from the 22nd of May to 20th of August, 1873, the sum of £10,791. During that time 21,400 tons were raised, at a cost of only 3s. 3½d. per ton; the cost of delivery at Liverpool along-side purchasers' vessels being 2s. 3½d. per ton, making a total cost of 5s. 9d. per ton, the average price realised being 16s. 1d. per ton, showing a profit of 8s. 4d. per ton.

Since that balance-sheet was made out Mr. G. E. Holt was directed to prepare a further balance sheet from the 21st August to the 31st October, after which date

the property would be taken over by the company, and the profits during this period, as shown in his balance-sheet, amounted to £9371. The profits, therefore, from the 22nd May to 31st October, will be seen, £20,192, from which, however, the royalty of 1s. per ton, amounting to £41,267 per annum, will have to be deducted, leaving a net profit of £18,516, or at the rate of £41,267 per annum.

The directors have secured the services of Mr. Joseph Loughman and the very able staff under whose management the colliery has been brought to its present very satisfactory position, and they can see nothing, therefore, to interfere with its continued prosperity. A reference to the above figures and to the balance-sheet would make it appear impossible for the work to be more economically and effectively carried on.

The advantages possessed by this colliery, and attending an investment in it, may be summed up as follows:—

1.—Its close proximity to the Port of Liverpool (with which there is a direct railway communication from the pit's mouth), where a heavy and continued demand for steam coal exists.

2.—The cheap rate at which it can be worked, many expenses incurred in other collieries, sufficient to pay a good dividend on the capital, being altogether absent.

3.—Its being taken over as a going concern, making large profits.

4.—That the property being taken over as from the 1st November, the profits from that date will accrue to the company, and will be available for an early dividend.

Considering the efficient nature of the plant, the facilities for working, and the proximity of the colliery to Liverpool, where there is a constantly increasing demand for the coal, and the exceptionally favourable terms on which the property has been secured, there has seldom been offered to the public so eligible an investment.

Shares can at present be had at par on application to Mr. THOMAS THOMPSON, Jun., 1, Palmerston-buildings, Bishopsgate-street, London, E.C.

Meetings of Public Companies.

DOLCOATH MINING COMPANY.

The quarterly meeting of adventurers was held at the mine on Monday, at which there was a very full attendance, Mr. CARTWRIGHT in the chair.

The following statement of accounts was produced:—

| | |
|---|---------------|
| Nov. 9—Tutwork and surface labour cost | £254 3 6 |
| and wages | 2495 4 2 |
| Dec. 27—ditto | 2361 10 0 |
| 29—ditto | 2945 11 11 |
| Tribute ditto | 5148 6 1 |
| Merchants' bills, &c. | 200 0 0 |
| Income tax | 157 18 9 |
| Water rents, one year | 29 10 5 |
| Stannary dues | £15,593 16 5 |
| Profit | 2,711 11 7 |
| Total | £18,593 16 5 |
| Tin ore, 260 tons 1 cwt. 0 qr. 24 lbs., for | £18,591 13 11 |
| Unstamped, 17 tons 3 cwt. 0 qr. 2 lbs. | 802 19 3 |
| Arsenic | 102 10 0 |
| Deduct Mr. G. L. Basset, dues | 977 7 2 |
| Leaving | £18,560 16 1 |
| Extra carriage of tin | 3 2 6 |
| Old stores sold | 29 17 10 |
| Total | £18,593 16 5 |
| Dividend of 12s. 6d. per share | £2685 0 0 |
| Balance | 111 4 10 |
| Profit | £2711 11 7 |
| Balance brought forward | 87 13 3 |
| Balance in hand | £114 4 10 |

[* The unstamped tin ore was some stuff raised from the bottom level, which was so rich that they merely crushed it and sent it to the smelting-house without stamping or dressing.]

The following report was read from the agents:—

Jan. 19.—We have commenced to sink the engine-shaft under the 314; the lode in this shaft has not been of any value for the last 50 fms. sinking, but is now worth for the length of the shaft 50f. per fathom. In the 314, west of the engine shaft, we have cut into the north part of the lode, on which we are now driving, and which is worth 40f. per fathom. In the 314, east of the engine-shaft, we are driving to the south of the lode, where the ground is easier, so as to communicate with the winze under the 302, as speedily as possible; but we believe that a rich lode is standing to the north of the level, the north part of the lode 8 fms. behind the end being worth 200f. per fathom. The winze under the 302, 12 fms. before the 314 end, is worth for 9 ft. long 100f. per fathom. The 302, east of new east, is worth 25f. per fathom. The 302, west of old dump, is worth 15f. per fathom. The winze under the 290 is worth for 9 ft. long 45f. per fathom. The 290, east of new east, is worth 30f. per fathom. The 290, west of old dump, is worth 15f. per fathom. The 278, west of old dump, is worth 20f. per fathom. The 265, west of old dump, is producing a little tin. The 248, east of Harriett's, is not of much value. The 248, west of Harriett's, is worth 15f. per fathom. The 236, just before this end, is worth for 9 ft. long 25f. per fathom. The 236, west of Harriett's, is worth for 9 ft. long 25f. per fathom. At the 236, west of Harriett's, we are still driving north to intersect the main part of the lode. The winze under the 224, west of Harriett's, is worth for 9 ft. long 50f. per fathom. We are rising over the 224, west of Harriett's, and sinking a winze under the 215, east of Stray Park, on the south part of the lode, which contains a little tin, but is not of much value. The winze under the 212, west of Harriett's, is worth for 9 ft. long 40f. per fathom. The 238, east of Stray Park, is producing a little tin. The 238 cross-cut, near the eastern part of Stray Park, is still being driven north to intersect the main lode.—JOSEPH THOMAS, WILLIAM PROVVIS, JOHN TONKIN, JOHN BAWDEN.

THE CHAIRMAN remarked that they had still to contend against the depreciated price of tin and the increased price of materials, but, in spite of these disadvantages, they considered themselves fully entitled to declare that day a dividend of 12s. 6d. per share. (Applause.) That he hoped would, under the circumstances, be considered satisfactory. (Hear, hear.) During the last twelve weeks they had raised no less than 280 tons, and sold the whole of it, and this reflected the greatest credit upon the managers of the mine, because it proved how well and earnestly they were discharging their duty. (Hear, hear.)

Mr. WARE proposed, and Mr. TREGLOWN seconded, the passing of the accounts, which motion was carried unanimously.

The Rev. J. BUTLIN proposed a vote of thanks to the agents of the mine. At the present day it was a very difficult thing for agents to stand before adventurers, but in Dolcoath their managers had good reason to be proud to do so. They had considered it insufficient to drive south, but had driven also north, and made a rich discovery of tin for them. If they looked at their tin on the surface they found they took all the care they could of what was raised; when their rich mineral was brought up they found excellent means of dressing it, and instead of sending it down the Red River—(laughter)—they broke it up and sold it for 800f. (Applause.) Their agents therefore, both above and below, were entitled to their best recognition when they came before them with so good a statement. Capt. Boyns, the manager of Wheal Owles, had told his adventurers that he did not know what to do. He had a great and grand mine, and he came before the adventurers at the end of his three months with an adverse balance of 800f. (Mr. Butlin) could not help, therefore, congratulating himself on his 12s. 6d. dividend, although he warned the agents that he should in time come to be satisfied with nothing under 2f. (Laughter.) But in these times they must be thankful for what under ordinary circumstances would not be a fair profit. On the present occasion, however, they had an increase of 2s. 6d. over what they received at the last account, and if they had a rise in tin, a piece of good luck which did not seem at all improbable at no far distant date, he prophesied that something even more cheering would be laid before them. He could not help saying he liked Dolcoath, he had long been connected with the mine—(a laugh)—and his experience had taught him to believe that whatever the state of the tin market was it was always some comfort to be in a bal which contained plenty of tin. (Laughter.) In Dolcoath they seemed to be able to go down as far as they liked, and the deeper they got the richer were their productions. It was 600 fathoms in length, and the excellent results which had been achieved exceeded their most sanguine expectations. To the agents, therefore, were their most hearty acknowledgments due. (Applause.)

Mr. WEST seconded the motion with very great pleasure, and said he should be pleased to hear from the manager some future remarks concerning the extraordinary discovery at the 314. He had that morning seen some of the stuff under the hammer, and he had come to the conclusion that in Dolcoath they were beginning to find a new mine, and the little tin they were having from Australia he believed to be what fell from Dolcoath into that continent. (Loud laughter.) He was convinced that Cornish tin would yet realise its old price, for he was sure the quantities of Australian tin must fall off, and as the demand would increase, the only thing they would have to do would be to take the tin as fast as they could to the market, where ready purchasers would be found. (Applause.)

Capt. JOSEPH THOMAS, in acknowledging the unanimous vote, said the agents had every reason to believe they had the confidence of the shareholders, and knowing that they felt pleasure in serving them to the best of their ability. He was glad to meet them with an increased dividend, for in such times the matter was one of great encouragement. The average price of tin for the last three months had taken 300f. off their profits, but they raised more tin to supply the deficiency. They would notice in the report one item for unstamped tin which had come from the bottom of the mine which was so rich that they sent it to the smelters without dressing. He was very pleased to be able to inform the meeting that they were meeting with so productive a lode in the engine-shaft under the 314, where they were struggling 15 years without any very profitable results, and although not very rich at present, the lode was improving, and would to all appearances continue to still further improve. From what he could judge they had now got down to a new deposit of tin, the metal was exceedingly good, better in fact than what they were accustomed to see, and it might, perhaps, as Mr. West suggested, have something to do with

Australia. (Laughter.) It seemed, however, that the nearer they got to that land the more improved their tin became, and he expected it soon to equal in quality the colonial stream metal. The western part of the mine was not looking so well, but in such an immense concern as Dolcoath some variations must of necessity be expected, and it was not impossible for improvements to occur here and there. Many persons were looking forward to a prosperous year for mining—he was one of them, and with a change in positions of coal and tin he expected a great difference in the industry of the country. (Applause.)

A vote of thanks to the Chairman terminated the proceedings.

TYRONE COAL MINING COMPANY.

The first general or statutory meeting of shareholders was held on Jan. 16, at the office of the company, Victoria Chambers, Belfast.

Mr. HENRY MATIER, Chairman of directors, occupied the chair. Amongst the shareholders present were Messrs. T. A. Dickson, J.P.; J. R. Martin, T. H. Aikin, William Wilson, Rev. J. A. Stewart, Lisburn; James Brown, Donaghmore; Thomas G. Lindsay, Wm. Gregg, John K. Boyd, Samuel McCausland, jun., James Barbour, Belfast; David Carmichael, Millisle; William Wood, and Alexander Walker, Armagh; C. H. Brett, solicitor of the company, and Mr. Silas Evans, the secretary.

The usual preliminaries having been disposed of, the report of the directors was submitted. They have taken possession of the properties, and commenced vigorous operations, so as to bring the collieries into active work without delay. At Congo colliery a new shaft is being sunk to work the coal bed at a lower depth than heretofore; one pumping and one winding engine are at work. They expect that during the year the mine or Five-foot seam will be laid open. At Drumglass, adjoining Congo, the new shaft is down 50 yards, at which depth the Five-foot coal was cut.

The SECRETARY (Mr. Silas Evans) entered into an elaborate description of the works, the nature and extent of the beds of coal, the machinery now applied for working the mines, and the intentions of the directors regarding the future working of the collieries. From Mr. Evans's explanation it appeared that the Five-foot or top seam was a good workable coal. He illustrated this by a description of numerous collieries that he had visited in Scotland and England, and those at work in the counties of Carlow, Queen's County, and Tipperary, where beds of coal are profitably wrought, the thickness of which varies from 1 ft. to 2 ft. 8 in. He showed that the Tyrone Coal Mines would bear very favourable comparison with such works, and that the coal from the company's mines, as wrought by the improved system introduced by the new company, was a very good article for general purposes, and was evidently appreciated by the consumers, as they found even the local demand to be very far in excess of the output.

Mr. T. G. LINDSAY said he was much pleased to hear the satisfactory accounts that had been given to the meeting of the quality and quantity of coal possessed by the company. He had not the slightest idea of such a state of things existing so near at home, and he considered the directors were bound in duty to give the shareholders the information that had been given to the meeting; and further that the public should also know that such an undertaking so likely to benefit the country was in progress in Ulster.

Messrs. Henry Matier, William Boyd, James Barbour, Thomas A. Dickson, James Brown, William Molynaux, and Joseph Moore were elected directors of the company, in accordance with the Articles of Association.

The proceedings terminated with a vote of thanks to the Chairman.

MINING COMPANY OF IRELAND.

The half-yearly general meeting of shareholders was held at the company's offices, Lower Ormond Quay, Dublin, on Jan. 15.

Mr. P. BYRNE D'ARCY in the chair.

Mr. W. HAROLD (the secretary) read the notice convening the meeting, the minutes of the preceding meeting, the directors' report, and the abstract of accounts to Nov. 30.

The CHAIRMAN, in proposing the adoption of the report and accounts, stated that at the Waterford Mine the directors had reduced as much as possible (by about 1000f.) the cost of production of copper ore. Twenty fewer miners are employed, and those retained do more work at the same salary. The steam-engine had been stopped, chiefly owing to the high price of coal, and a saving of 12f. to 15f. per month thus effected. Operations are confined to the shallow levels, but the raisings were much the same as in the previous half-year; so far they had been successful, and the manager, in his report, promised returns for the current half-year equal to those of the last from the Knockmahon Mines; his last half-year's estimate had proved accurate, and an advance in copper would give a profit. Their operations at the Ballycorus Works, county Dublin, were entirely confined to the smelting of lead and silver ore; they had a profit of 1300f. on lead smelting, and a loss of 2000f. on silver, leaving 700f. net loss. The loss was chiefly on Bolivian ores, for which they had contracted; they had hoped to make 27s. to 30s. per ton upon them, but the most experienced men in the kingdom had been deceived by them. Their collieries in the South of Ireland were promising well, and the Great Southern Railway line would soon be within 5 or 6 miles of some of their pits, and a branch would, it was expected, be run into the centre of their collieries; it would probably be finished in the course of a year or so, and they were sinking a double shaft at the Tipperary Mine, which brought them upon the best coal they had yet reached; they had obtained 4000f. profit in the half-year, and after extending the road to afford a facility of transit, and incurred other expenses for improvement, they had a net profit of 3549f. The cost of the carriage of coal to Thurles was extremely high, between 4s. 6d. and 5s. from the colliery to Thurles, 13 miles, and they could carry it 100 miles in England for the same money; with the railway the cost would be different. They had any amount of coal, but they could not sell them as the carriage was too high. The stock of coal and culm they were obliged to keep was, unfortunately for themselves, growing upon them, but if they did not keep it up the agitating portion of the colliers would long ago have turned out against them, and if they had not got the stock of colliers in Cork on the credit side, in came the water, and the men had a narrow escape of their lives. The water was all out now, and in the last two months they had made 92f. profit. With regard to the collieries, the manager further reported that matters had now taken a favourable turn at Duhallow, and although the rock (the seam) they are working produces scarcely enough of coal for the steam-boilers, still he is of opinion that they are now in a position to make a profit of 100f. per month, or allowing for contingencies, they had obtained 4000f. profit in the half-year, and after extending the road to afford a facility of transit, and incurred other expenses for improvement, they had a net profit of 3549f. 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lode had been struck, which it might be expected to reach in about 60 ft. further driving; and that the cross cut west, at that level, had been driven 156 ft. and would be pressed forward until the western lode had been struck. At the 600 ft. level the western lode had been opened up a considerable distance, the quartz taken from which has yielded well; 4718 tons from the stopes averaged 9 dwts. per ton, and 1546 tons from the drives gave nearly 6 dwts. per ton. This latter included quartz from the broken-up part of the lode north; excluding this, the average was 7½ dwts. per ton.

The reserve fund, amounting to 5368s. 5s., is invested in Victoria Government five per cent. debentures. There are no liabilities in England, excepting the amount charged for directors' fees, which have not been taken, and those in the colony are for the current monthly working expenses only. The revenue account to Dec. 31 shows a balance to its credit of 1852s. 12s. 2d. A draft for 3000s. has been drawn upon the directors to enable Mr. Bland to pay the company's proportion of the losses incurred on the mining operations during the early part of the year. Including this sum the operations of the company in the colony show a loss for the year of 1753s. 2s. 8d. The directors regret they are unable to recommend a dividend.

VICTORIA (LONDON) MINING COMPANY.

A general meeting of the shareholders is to be held on Thursday. The report to be submitted states that the sum of 112s. 3s. 4d. paid on Barford mining account has been written off against capital, and the remaining investments of the company are represented by the sum of 7190s. 2s. 4d., and divided as follows:—South Clunes Company, 4967s. 12s. 5d.; Prince of Wales Company, 1692s.; United Alibon and Prince of Wales Company, 202s. 10s.; London and Melbourne Company, 390s.; total 7190s. 2s. 4d.

GENERAL BRAZILIAN MINING COMPANY.

The adjourned special general meeting of proprietors was held yesterday at the London Tavern.

Mr. A. W. YOUNG, M.P., in the chair.

The notice convening the meeting having been read, The CHAIRMAN rose and said: Well, gentlemen, you remember about a month ago we met, it was, I think, on Dec. 19, and that on that occasion you thought it worth your while to authorise the directors to advertise for more money. They took into consideration in what shape it should be done, and they thought it the most likely—in fact, that the only way would be to issue some more 15 per cent. debentures. A circular has been sent to every shareholder, and advertisements have been put pretty freely in the papers, but the response is so ridiculously small that the directors thought it right to return the deposits. Therefore, that mode of carrying on the mines has failed. Now, the question is what will you do? There is about 3000s. in the bank, and the mine at present is being worked in a very small way that produces nearly enough to cover its own expenses. Under those circumstances is it your pleasure that you should go on with the small medium of capital you have in hand? If nothing good is struck in a short time it is obvious that that outlay will be a useless expenditure of your money, and that the mine will be of no more value than than now. Or is it your pleasure to-day to pass a resolution for liquidating the concern? And if so, I may state that you will have to appoint a gentleman to carry that business out, who is officially called a liquidator. That is, immediately you pass such a resolution you understand the directors' powers cease, and the liquidator takes possession of all the property. But in this instance the property out in Brazil, the land itself, the mine is mortgaged, that is especially hypothecated to certain gentlemen who hold bonds. The property out there has been put in the name of trustees for those gentlemen who hold the bonds; but they as creditors likewise of the company would be entitled supposing that the mines themselves did not fetch enough to pay them principal and interest—they would be entitled to everything here, including this bank balance. Therefore, unless this property can be sold to pay more than the sum standing against it for these debenture holders, practically the shareholders of the General Brazilian Company have no further interest in the matter, because they will get nothing. I think you must really all understand the position in which we are, and as I do not think it is for me to suggest what should be done, I shall leave the shareholders present to move a resolution in any sense they like, and it will then be my duty to put it from the chair. Now, although as I have said I do not wish to influence the meeting with the views I hold, still I have an opinion of my own, and I have no objection to state it, but I do not desire that that should influence any gentleman present in coming to a decision on the matter. My opinion is that having gone so far, it is hoping against hope to believe that the sum of 3000s. is enough to develop a good mine. Of course it is on the cards that it might prove sufficient, but the chances are, I think, decidedly against it, and then it is not to be forgotten that the trustees of the debenture holders, when the interest becomes due and is not paid, will probably be set to work by the debenture holders and then in all probability they will come down on the property in an adverse way, whereas if we assume the initiative and appoint a liquidator who knows the country, and who knows the proper people to apply to, there is just this chance that a purchaser might be found who would give more than the mortgage debt—in that event there would be something to come to the shareholders. At any rate I think the Brazilian market might be tried before the property was absolutely disposed of. The solicitor will draw up a resolution in any sense that is thought best by the meeting, either that you wind-up, or that you go on. We shall be better able to judge and decide on that point after any gentleman present ventilates the subject.

Mr. BURNARD was not at all surprised that the company had not succeeded in securing a large amount of subscription, for he believed the property would not realise more than just sufficient to cover its present indebtedness. How, then, could they expect to raise 30,000s. upon a property which was already mortgaged to its full value? Under the circumstances, he was of opinion the only course open to the shareholders was to resolve on an immediate liquidation of the company's affairs. Mr. Burnard then handed in to the Chairman a motion to that effect. Before that was put, however, he desired to refer to the situation in which the company stood at present. Unless the shareholders placed their property in the hands of a liquidator, officially authorised to protect the shareholders' interests, he thought they stood a very small chance of getting anything. If, on the other hand, they did not put their affairs in liquidation, and they carried on with the very small sum they had in hand—a sum ridiculously small for a purpose of this kind—there would be only the inevitable result for another six months. They must do one thing or the other—either wind-up or act, and they could not act efficiently with their present available means, therefore the only course that appeared opened to them was to wind-up. He felt sure they would not realise 30,000s. from the sale of their property, and he thought they would find it a very difficult thing even to pay off their debenture debt.

After some further discussion, the resolution submitted by Mr. Burnard was amended, and moved by that gentleman as follows:—"That it has been proved to the satisfaction of this meeting that the company cannot by reason of its liabilities and the indisposition of the shareholders to advance further funds continue its business, and that it is advisable to wind-up the same, that the company be therefore wound-up voluntarily."

The CHAIRMAN intimated that as this was an extraordinary resolution it would not be necessary to confirm it; the decision of the shareholders that day would, therefore, be final.

Mr. DIXON seconded the motion, which was then put and carried unanimously. A prolonged and tedious discussion then ensued as to the appointment of liquidators, in the course of which Messrs. Burnard, Rogers, and others addressed the meeting. Eventually, it was resolved that Messrs. Hardie and A. W. Young, M.P., be appointed to act with the trustees (Messrs. Blyth and Atwood), as liquidators of the company, and that their remuneration be 300 guineas.

Mr. BURNARD suggested that the liquidators should avail themselves of the valuable services of Mr. Tregellis (son-in-law of Capt. Treloar), who was about to proceed to Brazil, in the realisation of the company's property.

This suggestion was concurred in by the board, and it was resolved to employ Mr. Tregellis as an agent for the liquidation.

Mr. BURNARD, in moving a vote of thanks to the Chairman, expressed the hope that, after the liquidation of the affairs of the General Brazilian was completed another company would be formed, under the title of the Santa Anna Gold Mining Company, in which case he should feel disposed to invest 1000s. in the development and exploration of their old property under a new name. (Hear, hear.)

The resolution having been passed the proceedings were brought to a close.

INSTOCK COLLIERY COMPANY.—At a meeting of the directors of this company, held at the offices, Fenchurch-street, on Thursday, an interim dividend of 6 per cent. was declared for the period from the formation of the company to the end of last year, leaving 1856s. to be carried forward.

WHEAL BASSET.—At a general meeting of shareholders held at the mine on Wednesday, Mr. Rosewarne, of Godolphin, presiding, the accounts showed a debit balance of 2532s. Capt. Trevena stated that no tin ores had been sold since the last meeting, but the 70 tons credited had been stocked. Dr. G. A. Michell having resigned the purser'ship, the best thanks of the meeting were presented him, and it was resolved that Mr. Richard Martin, of Redruth, should be appointed his successor. The agents, Capt. W. G. Trevena, J. Opie, and W. Reynolds, after describing the various points of interest in the mine, stated:—"We are pleased to inform you that during the past three months the mine has continued to open out beyond our expectation, which has enabled us to return our usual quantity of tin, and a very great reduction in the labour cost and merchants' bills, which will appear in our next account; and, looking at the increasing quantity of tin ground we are laying open monthly, we have every confidence that we shall soon be able to wipe off the debt on the mine."

LEVANT.—At a meeting of adventurers, held at the mine on Jan. 13, the accounts showed a debit balance of 2248s. 19s. 7d. A call of 15s. per share was made. Capt. H. Boys and J. Thomas say:—"During the past four months we have opened in levels and winzes 64 fms. 0 ft. 7 in., and cross-cuts 9 fms. 2 ft. 9 in. We have 27 paces stoping on tutwork for tin and copper, and 15 pitches working on tributaries varying from 12s. to 18s. in 1/. Our man-engine to raise and lower the miners will be completed in another week; this will greatly facilitate the labour part of the mine. The machinery is now nearly complete, and our attention in future will be more particularly directed to the development of the mine and the raising of mineral; the sales of which will now materially increase. We consider our prospects very encouraging, and we have still the same opinion as to the ultimate success of the mine."

GREAT ROCK.—A special meeting was held on Wednesday—Mr. Peter Watson in the chair. A resolution was passed that, in consequence of being unable to pay its liabilities, the company be wound-up voluntarily. It was understood that the mine and plant would be offered for sale as a going concern.

GWYDYR PARK CONSOLIDATED MINING COMPANY.—An extraordinary general meeting of shareholders was held on Thursday, Mr. W. S. Sutton in the chair. It was unanimously resolved that the capital of the company should be increased by the issue of 12,000 shares of 6s. each, bearing a preferential dividend of 20 per cent., such shares to be offered *pro rata* to the present members, in proportion to the existing shares held by them. The report appears in another column. A special meeting will be held on Feb. 12 to confirm the above resolutions. It was mentioned that the lode is now worth 2 to 3 tons per fathom. The directors, who have full confidence in the mine, intend to take up the shares they are entitled to. The lead ore sold since June, 1871 from the Twarrell Mines, worked

under the disadvantages of a short supply of water, produced 1544s., and supposing the whole capital of 3600s. now proposed to be raised, should be required, the profit necessary to pay 20 per cent. would amount to about 60s. per month, and any profits beyond that would be shared by ordinary and preference shares alike. A vote of thanks to the Chairman closed the proceedings.

NEW GREAT CONSOLS.—From the general setting of this mine, published in the Journal of last week, a fair comparison can be drawn by any practical miner—or, indeed, by anyone who is not—between the statements in the extraordinary letter of "G. W." after a personal inspection, and the actual returns. In that letter it is stated that "every man should break 30s. worth of tinstuff monthly." Now, according to the setting referred to, there are considerably over 100 men employed underground, all of them working in productive bargains, consequently the present returns should realise over 3000s. per month, or something like 40,000s. per annum. What has "G. W." to say to this?

AUSTRALIAN TIN ORE SOLD IN LONDON on Jan. 20.

| Qty. Price. | Purchasers. | Qty. Price. | Purchasers. |
|----------------|-------------------------|------------------|------------------------|
| cwts. £ s. d. | | cwts. £ s. d. | |
| 9... 67 15 0 | Bolito and Sons. | 53... 58 2 6 | R. R. Michell and Co. |
| 80... 61 0 0 | Calenick Smelting Co. | 61... 67 15 0 | Do. |
| 16... 67 15 0 | Do. | 475... 66 10 0 | R. R. Michell and Co. |
| 27... 61 0 0 | Do. | 70... 69 5 0 | Redruth Smelting Co. |
| 70... 70 10 0 | Do. | 27... 70 10 0 | Tregoning and Co. |
| 68... 67 0 0 | Do. | 5... 72 0 0 | Do. |
| 30... 70 0 0 | Do. | 39... 70 10 0 | Do. |
| 130... 71 5 0 | Do. | 32... 72 0 0 | Do. |
| 105... 72 0 0 | Do. | 43... 72 0 0 | Do. |
| 27... 72 0 0 | Do. | 45... 70 0 0 | Do. |
| 60... 61 10 0 | Do. | 49... 70 0 0 | Do. |
| 80... 30 0 0 | Do. | 166... 71 5 0 | Do. |
| 21... 10 0 0 | Do. | 240... 72 0 0 | Tregoning and Co. |
| 24... 46 0 0 | Do. | 30... 70 10 0 | Redruth Smelting Co. |
| 42... 72 15 0 | Do. | 54... 71 5 0 | Redruth Smelting Co. |
| 60... 72 15 0 | Do. | 5... 65 0 0 | Do. |
| 47... 71 5 0 | Do. | 176... 66 10 0 | Do. |
| 18... 71 5 0 | Do. | 200... 70 10 0 | Do. |
| 14... 72 0 0 | Do. | 120... 67 15 0 | Charlestown Smelt. Co. |
| 35... 69 5 0 | Do. | 88... 68 0 0 | Do. |
| 103... 67 15 0 | Do. | 162... 70 10 0 | Do. |
| 137... 69 5 0 | Do. | 37... 72 0 0 | Do. |
| 167... 68 10 0 | Do. | 37... 42 10 0 | Do. |
| 140... 70 10 0 | Do. | 21... 2 10 0 | Do. |
| 101... 71 5 0 | Do. | 61... 71 15 0 | Do. |
| 100... 71 5 0 | Do. | 40... 65 0 0 | Do. |
| 202... 70 0 0 | Do. | 73... 75 0 0 | Do. |
| 79... 67 0 0 | Bolito and Sons. | 140... 70 10 0 | Do. |
| | Calenick Smelting Co. | 61... 65 0 0 | Do. |
| | Tamar Smelting Co. | 37... 71 15 0 | Do. |
| 290... 71 5 0 | Bolito and Sons. | 200... 68 17 6 | Tamar Smelting Co. |
| | Calenick Smelting Co. | 94... 68 17 6 | Do. |
| | Daubuz and Co. | 43... 60 10 0 | Do. |
| 105... 72 0 0 | Williams, Harvey, & Co. | 38... 67 0 0 | Do. |
| 190... 67 15 0 | Do. | 155... 68 2 6 | Do. |
| 12... 49 0 0 | Do. | 120... 71 0 0 | Do. |
| 31... 67 0 0 | Do. | 20... 66 0 0 | Do. |
| 48... 68 10 0 | Do. | 20... 67 0 0 | Do. |
| 201... 69 5 0 | Do. | 28... 68 2 6 | Do. |
| 40... 66 10 0 | Do. | 6... 67 0 0 | Do. |
| 100... 71 5 0 | Do. | 39... 68 0 0 | Do. |
| 30... 66 0 0 | Williams, Harvey, & Co. | 69... 71 10 0 | Do. |
| 38... 49 0 0 | R. R. Michell and Co. | 169... 70 0 0 | Do. |
| 20... 64 10 0 | Do. | 302... 71 0 0 | Do. |
| 6... 55 15 0 | Do. | 45... 71 0 0 | Do. |
| 189... 72 0 0 | Do. | 42... 64 0 0 | Do. |
| 35... 67 15 0 | Do. | 120... 71 7 6 | Do. |
| 147... 67 15 0 | Do. | 100... 71 12 6 | Do. |
| 56... 68 5 0 | Do. | 200... Not sold. | |
| 178... 70 10 0 | Do. | 280... Not sold. | |
| 55... 71 5 0 | Do. | 280... Not sold. | |
| 16... 49 0 0 | R. R. Michell and Co. | 280... Not sold. | |
| 17... 48 17 6 | Do. | 280... Not sold. | |
| 8... 47 7 6 | Do. | 280... Not sold. | |
| 30... 70 10 0 | Do. | | |
| 99... 72 15 0 | Do. | | |
| 65... 72 15 0 | Do. | | |

EACH COMPANY'S PURCHASE.

| | |
|--|---|
| Bolito and Sons.....Tons 105 7 | Redruth Smelting Company.....Tons 43 2 |
| Calenick Smelting Company.....Tons 48 18 | Charlestown Smelting Company.....Tons 44 17 |
| Williams, Harvey, and Co.....Tons 40 18 | Tamar Smelting Company.....Tons 92 12 |
| Daubuz and Co.....Tons 43 8 | Not sold.....Tons 58 5 |
| R. R. Michell and Co.....Tons 30 5 | |
| Tregoning and Co.....Tons 29 15 | Total.....Tons 488 10 |

PERUVIAN TIN ORE SOLD IN LONDON on Jan. 20.

| Qty. Price. | Purchasers. | Qty. Price. | Purchasers. |
|---------------|-----------------------|---------------|------------------------|
| cwts. £ s. d. | | cwts. £ s. d. | |
| 3¼... 65 5 0 | R. R. Michell and Co. | 2¼... 42 7 6 | Charlestown Smelt. Co. |
| 4½... 49 17 6 | Do. | 3½... 64 10 0 | Tamar Smelting Co. |
| 2½... 10 0 0 | Tregoning and Co. | | |

EACH COMPANY'S PURCHASE.

| | |
|------------------------------------|---------------------------------------|
| R. R. Michell and Co.....Tons 7 15 | Charlestown Smelting Co.....Tons 2 10 |
| Tregoning and Co.....Tons 2 10 | Tamar Smelting Company.....Tons 3 10 |
| Total.....Tons 16 5 | |

RAILWAY IRON ABROAD.

We have now tolerably complete and final statistics in illustration of the course of the exports of railway iron from the United Kingdom in 1873, and it may be well to compare the statistical experience acquired in that year with the corresponding returns for 1872, 1871, 1870, and 1869. The aggregate exports last year appear to have been 786,800 tons, while in 1872 they amounted to 945,420 tons, in 1871 to 981,197 tons, in 1870 to 1,059,392 tons, and in 1869 to 888,010 tons. The return for 1873 was thus the weakest on the list. But it will be more interesting and useful to carry the comparison back to 1856, and we accordingly do so, appending the value for each year:—

| Year. | Tons. | Value. |
|-----------|-----------|------------|
| 1856..... | 461,870 | £4,095,309 |
| 1857..... | 467,660 | 4,000,515 |
| 1858..... | 433,280 | 3,565,224 |
| 1859..... | 528,927 | 4,124,208 |
| 1860..... | 459,445 | 3,408,759 |
| 1861..... | 377,565 | 2,906,359 |
| 1862..... | 400,765 | 2,817,577 |
| 1863..... | 446,440 | 3,278,304 |
| 1864..... | 408,215 | 3,205,088 |
| 1865..... | 434,300 | 3,550,563 |
| 1866..... | 498,021 | 4,183,198 |
| 1867..... | 580,571 | 4,861,129 |
| 1868..... | 583,488 | 4,660,612 |
| 1869..... | 888,010 | 7,238,170 |
| 1870..... | 1,059,392 | 8,756,532 |
| 1871..... | 981,197 | 8,084,619 |
| 1872..... | 945,420 | 10,225,492 |
| 1873..... | 786,800 | 10,425,727 |

As regards the extent of the exports last year, it will be seen that the total receded to a lower level than in any previous year since 1869, while the value of the exports in 1873 was utterly unprecedented. Considering, indeed, how extraordinarily dear railway iron was in 1873, it is rather remarkable that the exports kept up so well as they did last year, since we may depend upon it that the consumption was reduced as much as possible during the twelve months. Extensions and new lines had necessarily to be postponed last year, or if they were not postponed they were, at any rate, prosecuted languidly, while renewals must also have formed the subject of more serious consideration than usual. The principal foreign consumers of our railway iron last year were, as usual, Russia and the United States, and our exports to those two great countries last year compared as follows with the corresponding exports in the previous four years:—

| Year. | Russia. | United States. |
|-----------|---------|----------------|
| Tons. | Tons. | Tons. |
| 1869..... | 246,162 | 299,198 |
| 1870..... | 207,676 | 421,824 |
| 1871..... | 78,367 | 412,277 |
| 1872..... | 106,839 | 447,304 |
| 1873..... | 162,275 | 185,702 |

It will be seen that both Russian and American exports of railway iron have experienced very violent fluctuations during the last five years. As regards Russia, it must be admitted that we still did a good export trade in 1873. With respect to the United States, there was last year, however, an extraordinary contraction, the panic of September, 1873—a panic which still continued to make its effects painfully felt in October, November, and December—having occasioned an almost entire suspension of construction operations in the Western States and Territories. It is doubtful whether even the greatly reduced total of last year will be maintained in 1874, since the decline in the American demand is still very severe and marked. For instance, in December we only sent the United States 7747 tons of railway iron, while the corresponding exports in December, 1872, were 31,686 tons, and in December, 1871, 37,372 tons. The latest advances from the United States certainly show some improvement in general business, but the credit of the new Western American rail-

roads—always, of course, more or less weak and precarious—is now utterly broken, and must revive very slowly, and only with the gradual occupation of the wildernesses into which, with a certain premature rashness, it was proposed to carry the iron horse. It may be interesting to note the steady improvement which has taken place during the last five years in the consumption of our railway iron in Canada and Australia, the exports to those important dependencies having been as follows since 1869:—

| Year. | Canada. | Australia. |
|-----------|---------|------------|
| Tons. | Tons. | Tons. |
| 1869..... | 23,792 | 23,329 |
| 1870..... | 36,291 | 8,691 |
| 1871..... | 61,991 | 14,691 |
| 1872..... | 77,255 | 25,004 |
| 1873..... | 54,873 | 35,080 |

Although here, again, there have been some fluctuations, it will be noticed that we last year sent the Australias and Canada 89,662 tons of our railway iron, as compared with 47,121 tons exported in the same direction in 1869, showing an increase last year of 42,541 tons. The Canadas last year suffered to some extent from the American panic, and the Canadian demand for our railway iron fell off in consequence; but, notwithstanding even the well nigh fabulous prices which prevailed during last year, the Australian demand attained a still greater importance in 1873 than in 1872, which presented a very sensible advance upon 1871. The Indian demand rallied a little last year, but very slightly, our exports of rails and railway material to British India in 1873 having been 18,087 tons, against 14,651 tons in 1872, 34,523 tons in 1871, 153,137 tons in 1870, and 99,224 tons in 1869. The Indian State lines must be making very slow progress; at any rate, they absorb almost infinitesimal quantities of our railway iron. We anticipate, however, some improvement in the Indian demand in 1874.

Original Correspondence.

WELSH MINING PROSPECTS.

[We have been requested to publish the following letter, which has been addressed to the Editor of the *North Wales Chronicle*.]

SIR,—In perusing your paper of Dec. 20, I see a paragraph, copied from the *Mining Journal*, on the prospects of gold mining in Wales, and another paragraph copied from the same journal in your paper of Dec. 27, attempting to show the great prosperity to be derived from a slate quarry now floating a certain lot of 50s. ten per cent. first mortgage debentures, at 50s. below par, but to be redeemable in three years. As far as my experience in slate quarrying goes this appears something new, and I think every person in the Principality interested in mining and quarrying (non-readers of the *Mining Journal*) ought to feel thankful to you for having placed the articles before them. It appears very obvious to me that the article on gold mining is from the pen of some one connected with that journal, as the annoyance he seems to feel at the closed doors against the press goes far to show. A few years ago that journal did not look with much disfavour on gold mining. It is a pity it should turn round now on its late unfortunate pets, and scarcely leave a stone unturned that would not damage their future existence. May I ask the writer of the article in the *Mining Journal* why he calls the Cefncoed Mine a "supposed mine?" Can he prove that gold has not been found there? The whole of his article seems to be written in a bad spirit, and wholly one-sided. He appears to base all the disastrous results on the mines—no portion on their management. But he will have a difficult job to make the public believe him, before whom he comes with his would-be secrets, when it is too late, and says gold mining has been disastrous to all concerned. Will he tell us the amount of *bona fide* cash paid for shares held by the directors when the concerns were wound up. He owns that many expensive machines were purchased which proved worse than useless, and may I ask if the old Cornish engines that lay rotting beside the road ever benefitted the shareholders, and if the enormous water-power at hand would not have answered every purpose if they had had some one about them to turn it to account? Was it necessary to keep such a large staff of officials, many of whom could be seen daily lounging on the roads, or was it legitimate towards the shareholders to offer shares to coachdrivers as an inducement to sell? I think if the new-born company, who have the power of choosing their directors, can only take a hint in selecting them, their undertaking may not be so very disastrous after all.

In alluding to the paragraph in your paper of Dec. 27, I see reference is made to a statement from a Mr. Thomas Trevithick, on the vast resources of the Prince of Wales Quarry. His statement that for quality and quantity he has never seen the like before speaks little for his knowledge of slate quarrying in Wales, or his opinion as an authority. I am not writing to depreciate this or any other quarry, for I believe, in too many instances, their failures are not the faults of the quarries, but their management. A proof of this is that so many old worked quarries, where or on which so much capital has been expended, are now in the market. Where abundance of good rock has been found there are so many characteristics connected with a valuable slate quarry, such as quality, quantity, and size. Best quality and good size must form a large percentage of the whole. Then, the percentage in weight of finished slates, for rock removed as rubbish, must be considered as a weighty matter in quarrying; ventilation, too, in underground quarries is a serious matter if neglected. Then comes cheap transit, and last, but not least, real economy in management. No new quarries can much longer be worked as they hitherto have been if they must ever pay a dividend. The last 30 years' experience proves it. Labourers and miners cannot now be engaged at from 8s. to 10s. per week, nor slate makers for 12s.; what would have been a slight mistake then, would be a serious matter now. Quarry managers now a days should be up to the task of laying before the shareholders at their half-yearly, or yearly meetings, a plan showing their progress and development in new quarries, and in all cases be able to introduce, and work, by their own superintendence, any valuable labour-saving apparatus introduced. The expenses are more than 100 per cent. now than they have been. I know there has been a feeling against the introduction of machinery, but if quarry proprietors will only assist in promoting its introduction, men will soon spring up equal to the occasion, a new era will commence, and proprietors will have the pleasure of seeing their quarries worked at a profit, in many cases where now nothing but losses stare them in the face.

VERITE SANS PETR.

ENGLISH MINING—PRESENT AND FUTURE.

SIR,—I sincerely ask your readers to carefully peruse the following, which appeared in the Journal of last week:—

OUR LEAD AND SILVER.—The Reeper of Mining Records reports that, in the year 1872, 83,985 tons of lead ore, of the value of 1,146,165s., were raised and sold in the United Kingdom; and that there was produced from these ores 60,485 tons 15 cwt. of lead, of the value of 1,369,115s., and 628,920 ozs. of silver, of the value of 167,230s. Therefore, in 100 tons of ore there were 72 tons of lead, and in a ton of lead 10 4 ozs. of silver.

Surely such a text is worthy of a short sermon. For hundreds, nay, perhaps thousands, and (who can tell?) perhaps millions, of years—of a positive certainty for the past century—the prevailing opinion amongst the scientific savants who have appeared upon this world's stage has peremptorily announced that lead and silver have the greatest affinity for each other—far more so than any other known metals. I am perfectly aware that the whole world has hitherto been against

able, and will not admit of concentration by the old washing method. When ores produce 4 or 5 per cent., violent efforts are made against the laws of Nature to concentrate them to 7 or 8 per cent.; and the whole of the noted mining captains who ride into my doctrine confess that thousands upon thousands of pounds worth of copper have passed away from our dressing-floors into the rivers. This 1 to 2 per cent. of material, therefore, constitutes the immense burrows of waste rubbish generally seen upon a mine, or is left underground wherever the raising of it can be shirked, and only the ores over 2 to 3 per cent. and upwards find their way into the smelter's hands, with naturally more profit to the smelters than to the mine adventurers.

It is a well-known fact that 1 per cent. tin and 5 per cent. lead are not discarded, and why? Simply because the specific gravity of tin and lead admit of concentration by the process of washing, which is as old as the hills, and known by every miner. I maintain that the real mineral wealth of England has never been recognised; aye, that the shadow has been grasped at, and the real quantitative substance ignored through nothing more nor less than blind ignorance, endorsed by obstinate prejudice. We will now take 1 per cent. copper ore containing 6 ozs. of silver per ton, which exists in discarded unlimited quantities throughout Devon and Cornwall; and although smelters cannot buy it in its present state, I can by a most simple process make it of great value and profit. The aim is concentration, which is the secret of successful mining; and in order to produce 1 ton of 70 per cent. copper 70 tons of 1 per cent. are required (of course, a little more in practice, as there must be some waste), and the 70 tons containing 6 ozs. of silver make the 1 ton of 70 per cent. copper give a yield of 420 ozs. of silver—a money value of 180*l.* to 170*l.*, but say only 140*l.* and it is 2*l.* per ton for the 70 tons treated. In the matter of dressing lead the lead is simply concentrated by its own weight, and no action whatever occurs to the remaining portion of the lode dressed, but by the chemical process every grain undergoes a change; and as the 6 ozs. of silver are disseminated through the 1 ton, or 2240 lbs. of lodey matter, and not merely in the 1 per cent., or (say) 22 lbs. of copper, it must be clear to your readers, unless they are either deaf, dumb, blind, or silly, or the happy quartette combined, that silver has by far, and especially under a chemical treatment, a greater affinity for copper than lead. If of course, I am well aware that to gain a real success the final results must mean a real profit, and this all-important point is highly satisfactory, since the average of the country for tin is only 20 lbs. to the ton, worth 15*s.*, and my patient process of extracting silver and copper is far cheaper than dressing for tin when carried out upon an extended scale. I am now addressing the wide world, and emphatically pronounce that the whole of the lodes in the Tavistock district average 1 per cent. copper, 6 ozs. silver, and 8 lbs. tin, apart from the rich deposits which now and then occur—to wit, Devon Great Consols, Wheal Friendship, and many other mines, but understand many of the known mines produce 2 per cent. copper, 8 ozs. silver, and 20 lbs. tin, and these figures are below the actual facts.

I take my "skill and reputation" upon every statement. Nay, cease those idiotic smiles, and listen to the explanation. Some of the very first chemists of the day have condescended to visit the works at Wheal Barnard, and are infatuated with the novelty, and perfectly satisfied that I am right. This means that the race of one man against the whole world is run and won. Look at Clitters, where low-class copper and tin abound. Yes, actually there are two fish caught upon one hook, and because there is some little difficulty in landing the two we hear of nothing but weeping and wailing, and gnashing of teeth. The great trouble of the day is that one mineral interferes with the dressing and sale of the other—the heart bowed down by weight of woe. But "looker, looker! looker! another bite! all on the same hook!" a silver fish this time. Call a meeting. Chair, chair, hum! Gentlemen, this is indeed most disastrous; we are perfectly willing to welcome one mineral, and would do our utmost to combat with two, but the three are above our comprehension, and beyond precedent. I therefore, after a full digestion of the complicated state of circumstances, propose to "knock the bal." Seconded and carried. Such is life. And if a limited company happens to be summarily wound up, as has been the case, for having several minerals in combination, with a lack of science to separate them, the poor unfortunate creditors have often to be satisfied with 10*s.* in the pound; but no doubt some of the merchants, like members of the Israelitish persuasion, can outwardly show their teeth, and at the same time inwardly pocket the money, knowing that even 10*s.* in the pound means 50 per cent. profit. I, however, am digressing, and must, in conclusion, hurriedly exhort your readers, one and all, to have perseverance, "skill and reputation," with faith hope, and charity.

Albion Mount, Tavistock, Jan. 21.

THOS. J. BARNARD.

MR. N. ENNOR AND THE CORNISH CAPTAINS.

SIR,—I would remind Mr. Ennor that whatever Cornish mine captains are, and whatever their knowledge of mining may be, they are not likely to be benefited much by reading what emanates from his pen, and appears in your valuable Journal week after week. If he would descend from that lofty eminence of self-conceit and bragadoceo to the same level as other mortals, and throw out some practical hints on mining that would raise a discussion likely to prove beneficial to the public, I think he would find many a Cornishman to meet him half-way, and be six to his half-dozen, in spite of all his gloomy dreams of their ability, honesty, &c. Or does he intend wonderful being as he is, possessing the secret of all mining knowledge in himself—Nature's laws and freaks, how to find good bays, how to save tin from the Red River, &c.—to retain his secret until he departs from this earth, of which he appears to know every inch, and then cast his mantle on some poor Elisha to preserve and perpetuate Ennor's astounding mining knowledge to coming generations? We remember some little time ago that Mr. Ennor boasted of having been consulted on some subject by, I think, Stephenson and some others of note. I would ask him, was he consulted the second time by the same person on any important subject? OLD TREBURGETT.

MINING PROPHETS, AND MINING ENTERPRISE.

SIR,—For some time past we have been favoured in the Supplement to the Journal with some letters from Messrs. Tredinnick and Co., on Mining Enterprise, Prognostications of Mining, &c. Now, as I happen to be rather largely interested in some of the mines Mr. Tredinnick has in those letters expressed disapproval of, I must say that at first sight they created in my mind no small amount of alarm. Remembering, however, that I had seen Mr. Tredinnick's name in the Journal on former occasions, I thought it might be worth while to examine some of his former predictions, and see how they have turned out:—

On June 3, 1871, in your Journal, Mr. Tredinnick, writing of Harmony and Montague, says "The extent of the levels opened in search of copper ore renders this mine all but a compeer to Dolcoath and Tincroft. We are much mistaken if upon the practical working of the properties the result established do not equal the best and most valuable ones in the West of Cornwall. It should be remembered that the Harmony and Montague possesses thousands of fathoms of ground laid open in search of copper that can now be wrought at profit for tin, and without the cost of development."

In Supplement to the Mining Journal, July 8, 1871, Mr. Tredinnick writes thus—"Trannack, West Jewell, East Pool, and West Jewell ought to be kept open. At that time the market value of East Pool was 14*l.* now 9*l.*; West Chiverton was 25*l.* per share, now 10*l.*; Trannack and West Jewell, after expending 13*l.* per share, and 2*l.* respectively, are now nowhere. At the same date, also in Supplement, Mr. Tredinnick says "Harmony and Montague, abandoned for copper, have proved wonderfully rich for tin under the management of Capt. Stephens, controlled by the supervision of Mr. Spargo, of Gresham House, and is likely to develop itself into a great and prosperous property. The quantity of tin left standing in the old workings is beyond calculation. At West Jewell success likewise attends the opening of an old abandoned copper mine; the tin is exceedingly rich, and the quantity at present, though unascertained, is proved to be considerable, and daily discoveries have been made of rich and paying deposits." Since this was written, Harmony and Montague have collapsed in disgrace, without having sold any tin, and West Jewell has shut up except above the adit level.

In the Supplement of August 12, 1871, Mr. Tredinnick writes—"In Cornwall, again, is North Pool, upon which 25,000*l.* has been expended, and a considerable capital remains to protect the future. Shares can now be purchased at much advantage to incoming investors." What has North Pool done since?

August 26, 1871, Mr. Tredinnick writes—"Wheal Lucy appears to be a certain prize; the shares are in number, and the large majority well held. Those floating about the market will soon become absorbed." Yet this "certain prize" has succumbed in the year just past, and been sold for the value of materials.

In Supplement to Mining Journal, January 6, 1872, Mr. Tredinnick recommended, "amongst the numerous undertakings well worthy the attention of the investing capitalist, Basset, South Frances, South Carn Brea, Spear Moor, West Trumpet, North Pool, Pendarves, New Hingston, Buller, Lucy, and North Buller." At that time Basset shares were saleable at 155*l.*, now (say) 35*l.* only; South Frances, then 65*l.*, now 13*l.*; South Carn Brea, then 8*l.*, now 3*l.*; Spear Moor, then 18*l.*, now nominal; Pendarves, then 50*l.* per share, since collapsed with great loss; Buller, then saleable at 32*l.*, since knocked, and the others in the list not worth enquiring into.

In Supplement to Mining Journal, May 11, 1872, after having called attention to his list of dividend mines, among which he thought worth of notice Castle-an-Dinas, Pendarves United, Poldice, Terras, and Kitty (Lelant). Mr. Tredinnick writes as follows—"In addition to the above mines there are others especially worth attention, as for instance South Crofty, Wheal Mount, East Basset, Lovell, New Rosewarne, North Pool, North Rosekar, Penstruthal, Par Consols, West Basset, West Jewell, West Tolgus, Wheal Lucy, and Wheal Buller." We ask where would an investor purchasing into the majority of the above have been landed? Let us see: South Crofty was then marketable at 105*l.* per share, now 30*l.*; Wheal Mount, then quoted 11*l.* to 11*l.* 10*s.*, now nowhere; East Basset, then 32*l.*, now 10*l.*; Lovell appears depreciated in value, only about one-third; New Rosewarne, then 9*l.*, now 7*s.* 6*d.* per share only; North Pool, then 3*l.*, now 15*s.*; North Rosekar, then 40*l.* per share, now 3*l.*; Penstruthal gone off about one-half; Par Consols gone altogether; West Basset from 17*l.* per share to 9*l.*; West Tolgus from 80*l.* per share to 27*l.*. It seems pretty clear to us that Mr. Tredinnick's clients would not have got off without considerable loss.

In the Supplement to Mining Journal, May 18, 1872, Mr. Tredinnick's letter reads thus—"Trumpet Consols is a sound investment; it has been at work for above thirty years, and is now paying 2000*l.* quarterly; the future is full of promise. Adjoining is a mine called Wheal Mount, the shares in which are selling at 11*l.* to 12*l.* per 1200th; the circumstances under which this property is introduced to the public lead me to anticipate a rapid advance in the price of shares, whilst the prospects are all that can be desired. All that is necessary is to open up the lodes, as their yield is already established."

August 10, 1872: After a glowing description of the Bassets, Bullers, Croftys, Tolguses, Rosekars, Setons, Dolcoath, Tincroft, Carn Brea, West Frances, Tresavean, &c., in Mr. Tredinnick's letter, he proceeds thus—"The veins almost invariably at their junction with the magnetic currents in the cross-courses form rich and lucrative deposits of minerals, and as these extend into the Trumpet Consols and Wheal Mount Tin Mines, and the lodes are already proved to be exceedingly productive, we can, with every confidence in the future, invite attention to this property, which is so fully described and certified in the reports of practical mining and local authorities, that little doubt can be entertained that the Wheal Mount Tin Mine will soon become a prize of great and exceptional importance."

January 11, 1873, Mr. Tredinnick writes—"Trumpet Consols, paying 8000*l.* a year dividends, is the cheapest tin mine in Cornwall, at 15*l.* per share; it pays 13*l.* per cent. interest. The mine is wholly free from market excitement, the shares being mostly held by local capitalists. The dividends for 1872 were 35 per cent. on the capital, and for the current year they will probably augment." On same date he says "West Trumpet we are now inducing our friends into. The company con-

sists of 32 shares of 125*l.* each, and upon subdivision greatly enhanced value will unquestionably become established."

Even as late as June, 1873, Mr. Tredinnick classes Trumpet Consols as one of the mines of undoubted value, and on August 9 he discovers that it is 5200*l.* in debt.

Is it not singular that a man whose prognostications have been so uniformly erroneous should still believe, or affect to believe, that he has the gift of prophecy? All your readers can prove my statements by reference to your columns, so they are not asked to take anything for granted, as I have given dates to enable them to refer without any trouble. Such writers as these are doing much mischief every way, as they induce capitalists to buy up at high prices shares which are sometimes entirely worthless, and they discourage the carrying out of bona fide mines of the highest prospects, because they cannot see a chance of performing a trick in the shares, and pocketing the balances produced by rapid fluctuations. The more thoroughly this system is enquired into and exposed the better for the capitalist, and for the proper development of the mines.

THE TRUTH.

BARYTA—ITS MANIFOLD USES IN THE ARTS.

BY DR. LEWIS FEUCHTWANGER.

The various salts of baryta have long been employed in pyrotechnics; as admixture to white lead; as material almost indispensable to card makers for a permanent white; in sugar refining; in chemical operations, &c.

In nature we find but few varieties. The sulphate, composed of 66 per cent. baryta and 34 per cent. sulphuric acid, is abundant in England, France, Germany, and the United States, where it most generally is found in connection with beds or veins of metallic ores, as gangue, or veinstone. Sometimes, however, it forms distinct veins, in company with the secondary limestone, and very often in fine crystals, along with calcite and celestine. Crystals of large dimensions occur in Westmoreland, Cornwall, Cumberland, and Derbyshire, in England. Beautiful specimens of septaria, cut and polished for table and other ornaments, having linings of brown heavy spar, are wrought in Durham, England, in Hungary, at Freiberg in Saxony, Clausthal in the Harz, in Bohemia, and in Auvergne, France. The localities in the United States are very numerous. The States of Connecticut and Missouri have long furnished abundant material for the arts. Next come Virginia, New York, New Hampshire, Massachusetts, Pennsylvania, Kentucky, and Tennessee. In Canada, fine crystals occur, and massive baryta in a 27-ft. vein. It is reported from New Mexico also.

The Bologna spar is the ornamental stone, of a brown colour and concentric rings, originally found in a bed of clay near Bologna, where it formerly was considered a great curiosity, on account of its phosphorescence, displayed after heating with charcoal, and it was called the Bologna phosphorus. The common name of sulphate of baryta is heavy spar, or barytes; specific gravity 4.5, and hardness 3. It is found in nature in large crystals, weighing 100 lbs. and more, and in slender needle crystals; also in massive aggregations of tubular crystals; likewise columnar and radiated, and in globular and nodular concretions; also lamellar and granular, earthy and stalactitic.

The sulphate of baryta often occurs associated with lime and some silica and alum, and is then called calcareobaryte; and if it is associated with strontia it is called baryto-celestine. If the sulphate of baryta gives out a foetid odour on striking or rubbing it it is called foetid baryta.

Witherite is a carbonate of baryta, having a specific gravity of 4, and a hardness of 3.2, and consists of 78 per cent. baryta and 22 per cent. carbonic acid. This mineral is found in considerable quantities in England at Alston Moor, in Northumberland, in Silesia, Hungary, Styria, Sicily, Chili, but not much in the United States. It is extensively employed in the manufacture of plate-glass and the manufacture of beetroot sugar in France, and for the production of blanc-fix, or permanent white. It is much used of late for paint, particularly in combination with soluble glass and white oxide of zinc.

The metallic base of the baryta salts is called barium, and is obtained from the carbonate of baryta, or chloride of barium, if put in a platinum dish and connected with the positive pole of a strong galvanic battery, in order to decompose it, mercury being placed in a hollow made in the baryta and connected with the negative pole. The result is an amalgam, which may be distilled in a bent tube filled with hydrogen. Barium is a white, malleable, and fusible metal, which oxidises easily in the air and decomposes water at common temperature. For the purpose of obtaining the pure baryta or barium oxide the nitrate is calcined at a red heat in a silver or porcelain crucible, or the carbonate is mixed with pulverised charcoal in a covered crucible, and then exposed for an hour to a strong heat. If oxygen gas is passed over it, it will absorb that gas with avidity, and become a peroxide. This is the substance used at the present day for the production of the peroxide of hydrogen, which is much recommended as a medical re-agent, and employed in the arts for bleaching animal tissue, or converting brown into blonde hair. To prepare it, the peroxide of barium is treated with hydrochloric acid, and the liquid is quickly evaporated to syrupy consistency, when it yields a slight chlorous odour. It decomposes easily into water and oxygen, and it is, therefore, almost impossible to prepare it properly in hot weather. At 212° Fahr. it decomposes with violence.

The oxide of barium, or caustic baryta, unquestionably rivals in causticity with potash, soda, and ammonia, and may be easily employed in the compounds with chromic acid.

The chloride of barium is obtained by fusing the sulphate of baryta, or native heavy spar, with chloride of calcium (the residue from the preparation of ammonia) in a reverberatory furnace, and subsequently extracting with hot water, leaving the sulphate of lime undissolved.

The chloride of baryta, which is now extensively used for producing a pure green flame in the manufacture of fireworks, is prepared by dissolving the artificial carbonate of baryta in caloric acid solution, when it forms beautiful shining tabular crystals. It is dangerous to keep it on hand when mixed with charcoal or sulphur.

Nitrate of baryta, which is likewise used in fireworks, may be easily prepared by dissolving the native carbonate in nitric acid, and evaporating the solution, whereby octahedral crystals of the nitrate are deposited.

The native sulphate of baryta is generally used for the adulteration of white lead or paint, to the extent of 25 to 50 per cent. Of this mineral 4000 tons are produced annually in Connecticut, and 2000 tons in Missouri, while 10,000 tons are imported from England and Germany. The native mineral, if very white and free from iron coating, is finely ground and dressed with water. But most of the native mineral contains fine particles of iron, and hence requires a different treatment—calcination for some hours, in order to oxidise the iron to a higher degree, when hot water, and, if necessary, a little sulphuric acid, will take up all the iron, and a beautiful white heavy powder is deposited, which is then dried, either by steam or in the same manner as whitening is dried, in the atmosphere. White oxide of zinc, as well as white lead, may be mixed with sulphate of baryta in linseed oil to a pigment, which is then fit for indoor and outdoor painting, and spreads well.

The artificial sulphate, called white or blanc fix, which is now largely manufactured in France, England, and the United States, is used in the manufacture of a paper of the purest white, in imitation of linen, and used for cheap collars, skirts, and cards. It was formerly manufactured from the native carbonate of baryta, but is now prepared from chloride of barium, which is obtained in England as a waste product at a reduced price. This is decomposed with sulphate of ammonia and a pure sulphate of baryta is precipitated. Another process for obtaining the chloride of barium, in order to prepare the permanent white, is by decomposition of the native sulphate of baryta with chloride of sodium, in a strong fire, and the subsequent solution of the fused mass in boiling water. The result is chloride of barium and sulphate of soda or glauber salt. About 5000 tons of permanent white are annually manufactured in this country and Europe.

In the chemical laboratory the barium salts are indispensable for the determination of sulphuric acid, which forms the sulphate as an insoluble precipitate. The carbonate of baryta is a strong poison to animals, and is used for killing rats, &c.

A green paint, composed of manganese and caustic baryta, under the name of manganese green, has been brought to market from abroad, but was soon superseded by the beautiful Guignet green, a composition of aniline and iodine.

MIXING IN CARDIGANSHIRE.

Tan-yr-Alit (Cardiganshire) Silver-Lead Mining Company (Limited).—A company under this title has just been formed, for the purpose of working a mine of that name, situated at Talybont, about seven miles from Aberystwith. It is in a district long known and worked for its silver-lead deposits, being west of Esgair-hir, Blaen Caelan, Allt-y-Crib, and other productive mines—in fact, in the centre of the mineral zone which traverses Cardiganshire. The mine has already been laid open, and several lodes discovered, from which many tons of lead ore were sold, although but a very shallow depth has been attained. There is an engine, boiler, &c., together with all the newest appliances for treating the ore, all erected by the vendor, who takes payment for the whole, together with the mine, in fully paid-up shares. The remainder of the capital, which is in shares of 100*l.* each, has been subscribed for privately:—

[REPORT.]

Mines Royal, Cardiganshire, Jan. 8.—The specimens so hurriedly sent bear no comparison with the general appearance of the lode, which, besides the quality being so thoroughly intermixed with manganese, the base or groundwork being iron ore of a high percentage, its enormous size (certainly not less than 10 fms. wide), presents another great feature—its being in a well-known lead-bearing strata, being, as you are aware, in the run of the Dyliffe, Van, and Great West Van lodes, and directly adjoining the Esgair-hir Mine. I believe, though there may be thousands of tons of iron ore taken from the back of the lode, that the mine will prove in depth to be lead; my advice, therefore, is to sink 10 or 15 fms., and then cross-cut the lode through, to ascertain its size and value. In conclusion, I beg to say that I have a strong conviction of the value of the property, as I think I have never seen a more likely place to prove a great prize, and one which can be proved by so small an outlay.—J. WILLIAMS.

FOREIGN MINES.

HORNACHOS.—A special letter has just been received from these mines, stating that the Alfortuna property has very much improved, and that in the opinion of the manager it will turn out the most important mine of the two. The lode at various points in operation ranges from ½ ton to 2 tons per fathom of rich silver-lead ore.

MENZENBERG.—R. K. Roskilly, Jan. 17: Dickins's Engine-Shaft. In the 30 ft. level, driving east of shaft, there is no change to notice; we intend to cut through it next week and take down the same, when it shall be fully reported on. The lode in the 30, driving west in ditto, or the ore part we are carrying on, is 4 ft. wide, composed of gossan, spar, and fine stones of copper ore—a kindly vein. We are pushing on with all other work with energy, and as soon as the plunger-pole arrives we shall immediately cut ground for bearers and cistern, in order to fix the same. Our men at present are engaged in the following work:—Eight men driving the 30 east, west of shaft, and filling kilbles; two landing, &c.; two enginemen, 1 smith, and one striker; two screwing, and sundry work; one making sets for levels, pickblows, and ladder-staves, &c.; and one man lengthening drain, &c. No other change throughout the mine. Our machinery is in good condition, and working well.

BENSBERG.—J. W. Hoffman, Jan. 18: At the west end of the open-cut we have now laid the carbonate bare on the newly cleared ground, and shall leave it undisturbed until wanted for delivery, in the meantime continuing to clear more ground. There is no change in the levels. The south end is now 7 ft. in ore-bearing ground, but the north shows no signs as yet. Production of dressed ore for the week, 10 tons; assay, 45 per cent.; stock of ore on hand, 30 tons.

[For remainder of Foreign Mines, see to-day's Supplement.]

WULFENITE, OR MOLYBDATE OF LEAD.—The superb specimens of this rare mineral, found in Box Elder county, have naturally excited much interest, as nothing so fine has ever been seen before, even among the local products of the Hungarian and Moldavian mines. Prof. Silliman first called the attention of mineralogists to the fact that in the Wasatch range of mountains this species replaced the phosphate of lead or pyromorphite commonly found as characteristic mineral in lead mines. Prof. Silliman's paper on this subject was published in the "American Journal of Science," in March, 1872, and was generally reproduced in other scientific periodicals. The specimens of this species first found by him occurred in the Emma Mine, in extremely minute crystals, which had escaped the notice of previous observers, but he found the same species also in ores from Swag and Davenport and other Little Cottonwood mines, and a diligent search failed to detect pyromorphite among the ores of this mining district. He also found the wulfenite among the ores from Big Cottonwood and the American Fork, and was thus led to venture the generalisation that it would prove to be the characteristic species of the Wasatch Range. This prediction has been remarkably verified since by discoveries in Tecoma, and shows the value of an accurate and minute knowledge of mineralogy in the study of mining districts. Prof. Silliman has had certainly a full share of abuse for his statements respecting the Emma Mine, but we recall with distinctness his bold prediction, in 1871, that the Emma was upon a great mineral vein, and his reasons then given for this opinion. Since that time Mr. Clarence King has rendered his remarkable testimony, in the case of the Eureka, the Richmond Consolidated Mine, in which he gives the most cogent and unanswerable reasons for regarding that mine, in limestone, as being a true fissure vein of the class known as pipe veins, and quotes the Emma as another example of the same kind of veins. Both are, in his judgment, filled from great depths, and differ from fissure veins in crystalline granitic rocks only by being in limestone. Those who sneer at the Emma as being only a "deposit," a "pocket," a "cave," or anything else but a deep seated vein which will hold in depth, will do well to read Mr. King's testimony, and remember that he has only rehearsed with more fulness of detail and amplitude of illustration just what Prof. Silliman declared to be true of the Emma in October, 1871. We have full confidence in the future of this great mine, for a time under a cloud, but sure to shine out again, to the confusion of enemies and the joy of all Utah, not to mention its shareholders—poor timid distrustful souls.—Salt Lake Tribune, Dec. 27.

THE EMMA we are informed is at present working where the late rich strike was made, but is somewhat put back from taking out ore on account of the water, which obstacle will be removed as soon as the new force-pump is put in at the bottom. The strike is said to be in granite, and much more extensive than was at first supposed. We have been shown some of the ore, which assays as high as 21675 in silver, and 23 per cent. in lead. This certainly looks as though this great mine had not played out. The regular daily shipments of good ore are continually made from the Emma.—Salt Lake Daily Tribune, Dec. 30.

CENTRAL VAN.—This mine appears to be attracting the attention of investors. Considering its close proximity to the Van, and the extent of the sett through which the lodes run, I have often felt surprised that so little speculation has taken place in the shares. The report of the directors, and the special reports presented at the recent annual meeting, together with the present satisfactory financial position of the company, seem, however, to have inspired confidence in the future of this property.

The following mine was received too late for insertion in its proper place:—

EAST BALLESWIDEN.—Thos. Trahair, Jan. 22: The 30, driving west from engine-shaft, is opening good tin ground. The stopes in the back of this level are looking much the same as they have been for the last three or four weeks. The lode in the back of the level, west of Morgan's shaft, is not looking quite as well. The men on the Rose lode are still raising a great quantity of tin ore. The whim and shaft tackle are all up in order to go to work. I hope the shaftmen will get the shaft in order in the course of two or three weeks.

ARTIFICIAL FUEL.—Mr. JAMES HUNT, of the Ewell Powder Mills, proposes to make by mixing peat or peat earth with coal or coke dust, breeze, lignite, or such like carbonaceous substances, and grinding them together in a grinding mill.

GLAN SEVERN.—We hear that one of the directors has visited this property during the present week. He speaks most hopefully of the mine, which looks exceedingly well. The new water-wheel for pumping is now completed, and works admirably; in fact, so evenly and well has everything been finished that when standing alongside the machinery when working hardly a sound can be heard. The lode in the adit is improving every day, while the point which is of all importance—the lode in the shaft—could not look more promising for a great mine.

SEMI-STEEL.—Mr. C. J. CAUMON, of Toulouse, has patented some improvements in the manufacture of semi-steel, and of railway bars composed partly of wrought-iron and partly of semi-steel. The invention consists, firstly, in producing a bar, plate, sheet, or slab of semi-steel of cementation by subjecting the crude unrefined iron to a process of cementation, and then refining the converted crude iron by heating and welding the same under the hammer, or by the action of rolls. Secondly, in producing a railway bar made of wrought-iron and semi-steel of cementation by subjecting the crude unrefined iron to a process of cementation, and finishing the metal after cementation.

LONDON GENERAL OMNIBUS COMPANY.—Traffic receipts for the week ending January 18, 1874, 12*s.* 8*d.*

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Mining Correspondence.

BRITISH MINES.

ABERDAUNANT.—S. Toy, Jan. 21: The 10 is now driven 12 fathoms west of Hill's cross cut, and is still driving it with a full crew of men. The forebark at present is poor, and on account of snow and the heavy rains we have had lately has increased our water very much. Intermediate Level: The stope here is not looking quite so good as they were last week, now worth 10s. per cubic fathom for lead.—No. 2 Adit: We still have good branches of lead in the north part of the lode, and at present is worth 9s. per fathom. All the machinery on the mine is in good condition, and all other works progressing satisfactorily.

ABERYSTWYTH.—John Trevelth, Jan. 19: The different bargains throughout the mines progress satisfactorily. We have no change to report in the lode at the 86 east. The same level west of shaft is improved, producing good specimens of lead ore, presenting an encouraging appearance. I hope soon to have a further improvement to report in at each end. The tribute pitches also look well. The dressing is going on as fast as the wet weather will admit of.

ALLT Y CRIB.—J. Clint, Jan. 20: The materials are ready, and I hope to have skip road and pumps in engine shaft to the 25 fm. level by end of the week. When the pitwork is completed and a lodgment cut out the shaftmen will be set to sink another draught of 110 fathoms. The lode in the 10, east below adit, has greatly improved in the last 2 fms. drive; it now contains a nice mixture of lead to the width of 3 feet, besides for 15 feet being a strongly impregnated copper and spotted with lead. The end of this month to the men to drive at 6s. 10s. per fm. is now only 3 to 4 fms. short of being underneath the 40 east winze, where the lode is also strong and productive; this winze is down over 5 fms., and the sinking is going on with four men, at 6s. 10s. per fathom. In driving with four men, at 5s. 5s. per fathom, from deep adit old cross cut to connect with the South Mine shaft, the lode is again producing saving stuff, and from its strength and appearance I think it not unlikely an extensive deposit of ore may be met with before the drive reaches the shaft. At the trial in deep adit, where two men have been working for little over a month (near old winze shaft), there are very promising indications of shortly making a valuable discovery. The rise in the 20 east, where now there are two men only, looks favourable, ground to stop being opened up. The same number of men are employed at South Mine as last month. Work, however, was very much retarded at the beginning of this month by the water breaking in with too great a force for the men to keep it down by tackle. We have now got pumps in shaft, and there is no difficulty in keeping the water forked. The sinking of shaft will be resumed in a few days.

ASHHETON.—M. Whitford, Jan. 21: The lode in the 40 east west is 2 feet wide, presenting a very promising appearance, yielding 6 cwt. of lead per fm., and I daily expect a further improvement. We have resumed the sinking of No. 1 winze below the 30, and we have just opened on the north part of the lode, which is yielding good stones of lead; we shall be in a position to say more fully on it in my next report; the object of this winze is to ventilate the 40, and to lay open ground for stopping. No lode taken down in the winze sinking below the 30, west of Browne's shaft. No particular change in the various other bargains throughout the mine since my last.

BAMPEYLED.—S. Mitchell, Jan. 19: The stope in the back of the 112 will turn out 2 tons of copper ore per fathom. No. 1 stope, in the back of the 102, is worth 35 cwt. per fathom; No. 2 stope, in the back of same level, will yield 2 tons of ore per fathom; No. 3 stope, in same level, will yield 2 tons of ore per fathom; No. 4 stope, in same level, will produce 2 tons of copper ore per fathom. The lode is improving in the 102, driving west of No. 4 shaft, now worth fully 1 ton of ore per fathom. The stope in the 100, driving west of No. 4 shaft, is also improving. The ground is favourable for driving at the 70, and the men making good progress. The ground at the 40, towards the eastern hill, is improving in appearance, and I am daily expecting a discovery of copper ore at this point. The lode in the new shaft at Stowford will turn out 30 tons of iron ore per fathom of good quality. Other points, both at this part of the mine and at Crowborne, are without change, averaging 10 tons iron ore per fathom at each point of operation. We have a cargo of copper ore at Barnstaple ready for shipment. The captain of the ship gave me to understand they will be up alongside the wharf to-night, if so the ore will be put on board to-morrow (Tuesday).

BEDFORD CONSOLS.—J. Rowe, J. Mitchell, Jan. 21: The lode in the sump winze sinking below the 57 fm. level maintains its size and character, without any particular change since last report. The lode in the 57 fm. level, west of engine shaft, is 4 ft. wide, composed of very strong muddle and fine stones of ore; altogether a very kindly appearance, showing every indication of being near and passing over a big course of ore, which will be satisfactorily proved in a short time, after the sump winze is sufficiently deep to admit the proposed drive in that direction.

BEDFORD UNITED.—Wm. Phillips, Jan. 22: Operations are still continued by the side of the lode in the 47 east, and in the rise. The mine throughout continues to look equally as well as reported last week.

BLAEN CROU.—Wm. Phillips, Jan. 22: The ground in the new adit, south of the Carlan river, has during the last few days greatly changed in character; it has become easier for progress, and the lode contains branches of spar and carbonate of lime, impregnated with lead and copper ores, looking favourable for greater improvement. If this change in the ground continues it will greatly increase our speed in getting in under the Esgrair road, besides the work will be done for less per fathom.—Engine Shaft: The work continues in the cross-cut extending south from the 20 east since I saw you on Monday. I reported on Jan. 7 of having cut into a strong sparry lode; this is now cut through to a wall which dips south, and this lode, or part of the lode, is about 3 feet wide, and for that width is full of spar. The character of the ore is blue kilaas, with branches of spar and carbonate of lime, and water coming more freely from the ground.

BLUE HILLS.—S. Bennetts, A. Gripe, Jan. 17: The lode in the 66, east of Letcher's shaft, is not so productive as it has been, at present worth from 7s. to 8s. per fathom; the ground, too, is somewhat harder. A winze is to be forthwith commenced below this level to ascertain the value of the lode a little deeper, and at the same time a little further from a gossan. The Wheal Betsy lode in the 13, east of Wheal Joy shaft, is of a promising character, but as yet not very valuable. The tribute pitches are not so productive as they were some few weeks since.

BOG.—W. T. Harris, J. Barked, Jan. 21: We have been delayed a little this week in raising the engine shaft, and in consequence there is no change to report in the sinking below the 163. We are getting on well in sinking the 163, and expect to add a couple of new pitches to our present number on Friday. Friday being our setting-day a full report shall be sent you next week. We have sampled to-day 35 tons of lead for sale on the 28th inst.

BRYNAMBOR.—George Spargo, Jan. 21: The men are making good progress in sinking shaft and cutting trip-plat below the 32 fathom level. The lode in the 32 east has improved much in appearance during the past week, and is yielding some good stones of lead ore. The same remark will apply to the 32 west. In the stope at the back of the 22 east we have just struck some good lead on the south wall, but shall see more of it in a few days. Other points in operation are without alteration.

BURROW AND BUTSON.—John Christophers, James Mayne, St. Agnes, Jan. 21: The 20, going east from Tonkin's shaft, is looking better, the lode still being about 3 ft. wide, and 1 ft. of it good for lead, blende, and copper. This is coming under the lead ground near Hodge's shaft worked by the old men, who at that time had a run of lead 1 ft. wide. In clearing the 20, west of cross-cut, near the engine-shaft, we continue to find stones of lead in the stuff broken down from the back. Having close timbered the back, we cannot see much to value. The men have been taken from the 62 east to clear the 40. The end west is unproductive at present. All other parts of the mine continue as before.

DARGYON.—T. Hodge, Jan. 21: The lode in the 20, driving west of engine shaft, is improving. The stope in the back of the 70 west is worth 9s. per fm. The stope in the back of the 60 east is worth 8s. per fathom. In the other bargains I see no change since my last. We are engaged carting down our lead to Aberystwyth, and it will be weighed off as soon as we get it down.

CENTRAL VAN.—John Trevelth, Jan. 20: The men have nearly completed the preparatory shaft work previous to fixing the pitwork, and will in course of a few days begin the further sinking of the engine shaft, which will be sent down as fast as nine able miners can sink it. Immediately the rails are fixed in the deep adit level the end will be pushed on by six men. The great advantage that will arise out of these two operations is apparent, as I have already stated. The engine works admirably, and the shaft will work in it in thorough order.

COURT GRANGE.—J. G. Green, Jan. 21: The Elgar cross-cut is not yet into the lode; the men have completed the bargain—10 fms., at 74s. The end is letting down much more water than it had done, and I fully calculate that another 4 fms. driving will intersect the lode. All the surface work is being pushed forward with energy, and every effort is being made to get our large pumping-wheel to work this month.

CRENVER AND WHEAL ABRAHAM.—Wm. Thomas, John Vivian, James Hammill, Jan. 21: The men have completed cutting the plat, and the putting in of a plat solar at the 22s, at Sturt's shaft, and they will at once commence to drive west. The 23s, driving west of shaft, is 4 ft. wide, and worth 10s. per fathom for copper ore.—Crenver Shaft: In the 160, driving east of this shaft, the lode is 1½ ft. wide, yielding a little tin, but not enough to value. The lode in the 140, driving west of the rise, is 2 ft. wide, producing good stones of tin.—St. George's Shaft: In the 203 driving east on the south lode, and west of shaft, the lode is 2 ft. wide, producing copper ore to the value of 6s. per fathom.—Pelly's Engine-Shaft: The men are progressing fairly in sinking the shaft. There is no change to notice in the 243 fm. levels driving east and west of the shaft. In the 234 fathom level driving west the lode is, on the average, 5 ft. wide, and worth for copper 10s. per fathom. We have set a bargain at 14s. to eight men, to take down the south side of the level preparatory to sinking below east level.—Blew's Shaft: In the 220 driving west the lode is 5 ft. wide, producing good stones of tin.—Richards's Shaft: In the 200, west of shaft, the lode is 5 ft. wide, and worth for copper ore 12s. per fathom, with a kindly appearance for further improvement. The lode in the 180 driving west continues without change. We sampled yesterday 342 tons of good quality copper ore. There are employed this week on tutwork 141 men and boys; tribute, 39; at surface, 60; total, 240.

CWM DWYFOR.—N. C. Morcom, Jan. 22: In the north cross-cut we have just passed through a large copper lode. We are pushing on this cross-cut as fast as possible, and expect to intersect the old lead lode in about 5 fms. Judging from the appearance of the lode in the old lead shaft, we may reasonably look for good results. When we have cut the lead lode we shall drive east on its course in order to communicate with the shaft for ventilation in carrying on other operations. The south cross-cut is suspended for the present, and the men put to drive east on No. 3 lode, where some large stones of copper and lead ores have been broken. The lode at present is divided by a horse, with quartz, copper, and iron pyrites on its south side, and a leader or branch on the north. The fourth lode, intersected by the south cross-cut, has a very kindly appearance. There are several important points on the different lodes to be operated on, and as soon as the crusher and the other dressing machinery are erected we shall be able to make returns of copper and silver lead at once. The pumping and winding machinery are in good order.

CWM ELAN.—W. Goldworthy, Jan. 17: In the 28, west of engine-shaft, we have intersected the south part of the lode, not sufficiently opened upon to make any value thereof, but still it is producing lead and blende ores by this day week; I shall be able to give you more particulars. No change to remark in the same level east of shaft. All the stopes are producing the same quantity of lead and blende ores as last advised you. Our machinery is working well.

CWMYSTWYTH.—Jan. 19: We beg to state our stopes and tribute pitches are looking just as usual. We have commenced a new winze in a nice lode in the bottom of Gill's level, and should the ore hold down, which we have reason to think it will, when opened out, be a great help to our future samplings. Our machinery is all in good order, and we are well on with the dressing as fast as possible, and shall sample 15 tons of lead ore on Jan. 30.

DE BROKE.—T. Hodge, Jan. 21: No lode has been taken down in the 25 east end since my last. The 25 west end is looking better, the vein being mixed up with lime, spots of lead, and very nice looking quartz; we expect an improvement here soon. All surface work is being pushed on as fast as the bad weather will allow.

DENBIGHSHIRE CONSOLIDATED.—J. Pryor, Jan. 22: The incline is still producing good paying stuff—the ore carries very flat, which will fully account for our not having intersected the run in the level below. There is nothing to notice regarding change in the 112 east and west.—Parry's Shaft: The pump in the sump answers its purpose well. We shall now place the men that were sinking to drive east from the bottom, and strip down the lead which is standing each side.

DYLIFFE.—Edward Evans, Edward Rogers, Jan. 21: We are pushing on the principal points of operation as fast as possible in order to enable us to increase the returns. The improvement in the 25 west is opening out very well, and likely to continue for a long distance. The 25 and 15 are driving by a full quantity of men, so that we may reach the rich ore zone down in the bottom of the adit as soon as circumstances will permit. The 105, west of Boundary shaft, still continues just as usual, thereby showing that the lead-bearing ground is lengthening in that direction, and we expect to have at the 117 a longer and better lode than at the present level 12 fathoms above. At the shaft we are making good progress towards that object. The other points are just about the same as named in the last setting report.

EAST BLACK CRAIG.—Thomas Cogar, J. Betty, Jan. 21: The No. 3 cross-cut east of shaft, at the 108 fm. level, has improved for lead since last reported on. We will report value of the same in our next report, when we have opened out a little more. The stope west of winze is as good as last reported upon. The stope west of the 98 east driving east, in a nice position, common to the 105, and on of blende, lead, and blende. The stope west of shaft is worth 14s. per fathom for lead. The old stopes are yielding about their usual quantities of lead. The winze at the 88 is in good ground, but is not yielding as much lead as when last reported on.—Palnure Trial: The present end is worth 4s. per fathom for lead. The back of the level is worth fully 8s. per fathom. Surface work and machinery as usual.

EAST CHIVERTON.—R. Southey, Jan. 21: Good progress has been made in driving the 64 west of engine-shaft; the lode is large, and at times producing good stones of silver-lead, which is more than we expected, as the present end is 15 fms. east of the shoot gone down in the bottom of the 52 fm. level. We are pushing on this level with all possible dispatch, in order to reach the productive lode as early as we can, when we may anticipate good results. The lode in the 52, driving east of the engine-shaft, has improved for blende, and is much larger than when last reported on, now fully 4 feet wide, composed chiefly of friable quartz, blende, and muddle, with very fine silver-lead ore. I should not be surprised any hour cutting into a fine lode for the latter mineral. The stope in the back of the 40 is the same as last reported on. Our water is exceedingly easy for this season of the year. Engine only working 3½ strokes per minute. Everything progressing satisfactorily.

EAST DAREEN.—Jan. 20: Taylor's Shaft: In the cross-cut north of the 116 east the ground is chiefly composed of a dark clay-slate, branches of carbonate of lime, and stuff for exploring. In the stopes over this level the lode is 1 yard wide, and in the 120 cross-cut since last reported, and now yielding about 5 to 10 cwt. of lead ore per fathom. At Skinner's shaft, sinking under the 104, the lode is from 3 to 4 ft. wide, principally composed of a dark clay-slate, grit, and carbonate of lime, containing small spots of lead ore. The tribute pitches throughout the different levels on an average are without change to notice since last reported on. Our machinery is in good working order. The weather for the past fortnight has been much against dressing, on account of strong winds and heavy floods of rain, but the drawing and dressing are being pushed forward with all speed possible. We have to day sampled 50 tons of silver-lead ore, for sale on Feb. 2.

EAST WHEAL BASSETT.—R. Pryor and Son, Nicholas Bartle, Jan. 21: The lode in the 110, west of cross-cut, is 3 ft. wide, and worth 10s. per fathom. The lode in the 101, stope in the back of this level is worth 10s. per fathom, and in New 2 and 3 stopes, in back of ditto, the lode is worth respectively 6s. and 8s. per fathom. The lode in the stope in the bottom of ditto is worth 7s. per fathom, and the lode in the No. 2 stope, in bottom of ditto, is worth 25s. per fathom. The lode in the 70, driving west of cross-cut, has an improving appearance, and is now worth 10s. per fathom. Other places throughout the mine are without change to notice. Friday being our pay and setting day a full report shall follow.

EAST WHEAL GRENVILLE.—E. Hosking, W. Bennetts, Jan. 22: The lode in the engine-shaft sinking below the 120 is 3 ft. wide, and producing a little copper and tin. The lode in the 20, west of shaft, is 3 ft. wide, and worth 10s. per fathom. The ground in the 120 cross-cut is a little easier, and the men are making good progress. The lode in the 110 east is 18 in. wide, yielding saving work for copper and tin. The lode in the 110 west is 2 ft. wide, and worth 6s. per fathom. The lode in the 95 east is 3 ft. wide, and worth 10s. per fathom. The winze below the 95 east is worth 2 tons of copper ore per fathom. The stopes above the 95 east are each worth 8s. per fathom. The stope below the 85 east is worth 7s. per fathom.

ELGAR.—J. Trevelth, Jan. 22: Our shaft is down 13 fms., and the rise to meet it over 1 fm., leaving 5 fms. more to communicate to the adit level; as soon as this is done I will put a pair of men to stope in the back of the level, where the lode will produce 1 ton of lead ore per fathom, and in places 4 tons of blende per fathom. Our men are working with a will, and all points of operations are progressing satisfactorily.

FRANCO CONSOLS.—W. Doidge, Jan. 20: There is no particular change in the shallow adit west since last report; good progress is still being made. The sawyers have commenced cutting stuff for the rails, and we expect the tramway in the early part of next week, when we shall commence to lay down the road.

FRANK MILLS.—J. Nicholls, Jan. 14: I have carefully inspected this mine to-day, and the following is my report of its prospects:—In the north part of the mine, at the 45, a level has been driven on east branch several fathoms; in places the lode yielded 1 ton of lead ore per fathom; the drive is being continued by men, at 4s. 10s. per fathom, and the lode in the end has been comparatively poor for a few feet, but is again improving, and now yields 5 cwt. of lead ore per fm. The stope in the back of this level, by six men, at 17s. per fathom, is now producing 5 cwt. of lead ore per fathom. I notice that in places at each end of the stope the lode is of much greater value; this shoot of lead has not been seen above or below this place; the stratum is conical, and composition of the lode favourable, therefore I have no doubt a great deal of lead will be raised from about this point. A cross-cut is now being driven east at the 45, by four men, at 5s. per fathom, to intersect this lode 12 fathoms further south, and attention will shortly be given to prove it at the 60.

The north winze is communicated from the 100 to the 115, which is a thoroughly good level, and the men are making good progress in driving the 115 north, on the iron lode, but seeing you had already laid open immense reserves of iron ore I advised the suspension of this for the time, in order to have the men to extend the cross-cut west from the 84 south. This cross-cut was started some years ago, with a view to intersect the western lode 70 fathoms south of any point where it has yet been seen; the cross-cut has reached a most congenial channel of ground for lead, and I consider the lode will be intersected in about 15 fms. more; and taking into consideration the fact of there being full 200 fms. in length on this lode entirely unexplored, I see no reason why it should not prove equally as productive for lead as the north ground did, the prospects for lead, therefore, are good. In conclusion, I agree to mark this mine as having immense reserves of iron ore, and I am sure, and it only requires the completion of the railway for this mine to resume dividends.

FRON VELLAN.—Capt. Harper, Jan. 21: In the cross-cut driving north of the level, west of deep adit, the ground is much the same as for some time past, still hard for driving, but letting out much more water than what we have seen here before. In the new shaft, sinking in the eastern part of the set, the ground here is much the same as last reported; satisfactory progress is being made in sinking; there is not much water at present in the shaft.

FURZE HILL.—W. Doidge, Jan. 20: No. 1 North Lode: Good progress is still being made in the 51 east, and I hope in my next report to have something to report in the 51 east, and in the 51 west. The stope in this level is much the same as for some time past, worth 3s. 10s. per fathom.—Middle Lode: In the 54 west, 10 fms. from cross-cut, we have commenced a rise to communicate with the 40 for ventilation, and to open out ground for stopping; the lode here is producing a little tin, and I expect an improvement in the course of a few days. The lode in the 40 west is about 20 in. wide, composed of capel, spar, and tin—a very kindly end. A new stope has been opened in the back of this level, west of the rise, referred to in my last report, where the lode is worth 6s. per fathom. The stope east of the rise is worth 7s. per fathom. We are busily engaged in preparing another parcel of tin for market, which will be about 3½ tons; and should the lode in the 54 east, on No. 1, north lode, turn out as I anticipated, it will enable us to increase our samplings.

GAULTON COPPER.—Geo. Rowe, Geo. Rowe, Jan. 17: We have of late intersected several small branches crossing the lode in the 105, east of King's engine-shaft, which we consider a large cross-course split up, a part of which is now in the point where we are cutting into and taking down the lode, to the east of which the lode is laid open 6 ft. wide, producing very strong muddle and fine stones of ore, with an increase of water, which will drain the levels above quite dry. The lode in the 95 east has also improved during the past week, yielding muddle and ore to the value of 8s. per fathom. The winze on the south part of the lode at the 95 is yielding 2 tons of ore per fathom of good quality. The lode in the 85, sinking below the 85 east, is worth 8s. per fathom. The lode in the 20, west, sinking below the same level is worth 8s. per fathom. The lode in the stopes in the back of the 70 is worth 12s. per fathom. All other points are without change.

GOGINAN AND LEVEL NEWYDD.—Jan. 13: The lode in the 100 east is 5 ft. wide, principally composed of spar and clay-slate, with spots of ore occasionally, and the ground harder for exploring. The stopes over the 110 east are worked out to the bottom of the 100, and the men employed in the same are now filling up on stulls to secure the 100. The rise over the 70 is being carried up as fast as possible by six men; the lode is 4 ft. wide, producing good stones of ore at times. The laying down and fixing of pipes for conveying water to Bryn Pica wheel will be completed about the end of this week, when the men will again go on with the repairing of Bryn Pica shaft. The water has been very much against our surface operations; however, all things are being pushed on as fast as possible. The tribute pitches are yielding on an average 12 cwt. of lead ore per fathom. The dressing is going on as usual, and we shall get another parcel of ore ready for market as quickly as possible.

GORSEDD AND CELYN LEVEL.—W. Edwards, Jan. 22: I have much pleasure in informing you that on Friday (18th inst.) we intersected the Holway lode from Coetla Gelynen shaft. Up to present time we have the vein fully 4 ft. wide, of precisely the same character as the ground we had in Nos. 1 and 2 sumps, and very good lead ore. The men have extended some distance east upon this course, and we have evidence of its lasting capabilities. The fact of intersecting this vein at the point referred to, containing such paying stuff, is of the greatest importance to us, taking into consideration the long run of ground we shall have at present unexplored. We are now getting on well with the dressing.

GREAT WEST VAN.—J. Roach, Jan. 22: The 46, east of shaft, on main lode, contains strong branches of lead and blende, but the north wall has not yet been seen. Same level west as last reported on, yielding 15 cwt. of lead per fathom. Greene's lode, east of shaft, is about 4½ ft. wide, and consists of country rock, branches of blende, lime, spar, and strong cubes of lead—very promising. The 34 east produces a little lead ore, but not quite so good as when referred to in my last; the lode bears a little south of its usual course. The 34 west is still in a strong lode, and yielding this week 1 ton of lead per fathom. The winze under the 22 has been communicated with the last-named level; therefore, we shall let stopes east and west of it on Saturday next. We have commenced sinking a winze under the 22 fm. level, 25 fms. west of the latter; here the lode is very wide, and is composed of carbonate of lime, gossan, and good stones of lead ore; this will, no doubt, very much improve as the winze shall be deepened. The Eliza engine-shaft is in good course of sinking, and the ground contains sundry branches of lead ore, which is a good indication for a shaft going down; at the same time, however, the lodes in this part of the mine, since working, have not altered in value, the dressing of ore is going forward as usual. The stone-breaker will be ready for work in a few days, and we hope to increase our returns as the spring advances.

GUNNISLAKE (Clitters).—William Skewis, John C. Seecombe, Jan. 21: We have set the engine-shaft to be sunk 15 ft., trip plat to be cut, and everything made complete for sinking to another level below the 161. The lode in the 164 east has improved, and is now worth 50s. per fathom. In this level west we are through the cross-course, but there is not sufficient done to value the lode. The lode in the winze sinking in bottom of the 152 still continues worth 30s. per fathom. The stopes in back of the 152 are worth as follows:—No. 1, 14s.; No. 2, 13s.; and No. 3, 5s. per fathom. The lode in the 140 west is making larger, and producing saving work for copper ore. We have not yet got through the cross-course in the 116 fm. level. Four different stopes of copper ore taken from the 162 east have been assayed, and made following produces:—No. 1, 68½ per cent.; No. 2, 57 per cent.; No. 3, 51 per cent.; and No. 4, 28 per cent. All the machinery is in good working order.

GWYDYR PARK.—Wm. Bennetts: The 25 has been driven east since Mr. Hitchins inspected the mine, on Nov. 4, 5 fms., which makes the distance driven on the course of the lode 14 fms.; for the whole drive the lode has produced from 5 to 15 cwt. of lead ore per fathom, and in some parts of the drive, in the bottom part of the level, it has produced from 2 to 3 tons of lead per fathom. The box of lead which I sent away from the mine on Monday for the office was broken in the last 9 ft. driven, where the lode is worth from 2½ to 3 tons of lead per fm.; the lode in the present end is worth 10 cwt. of lead per fathom. It is my strong opinion that we are driving over a very valuable piece of lead ground, which will be opened up at deeper levels. In the stope in the back of the 25 east the lode is worth 15 cwt. of lead per fathom. In the 25 fm. level end south the lode is 3 ft. wide, worth 5 cwt. of lead per fathom. This end is now getting under the lead ground that we had in the bottom of the 15, which produced most of the lead that has been sold by the present year, from the mine, with the exception of the last 15 tons sold. The stope in the back of the 25, on the north and south lode, is worth 7 cwt. of lead per fathom. We have from 4 to 5 tons of lead cleaned, 3 to 4 tons in course of cleaning, and a large pile of lead stuff broken underground. For the future working of this mine I would strongly recommend the sinking of the engine-shaft to a greater depth as soon as possible, for I believe the north and south lode is well worthy of such a trial. Independent of this, there is the east and west lode, which has shown such a favourable appearance in driving the 25 fm. level east, which is going towards the new piece of ground, where a shaft has been sunk 18 fms. deep, and a great many tons of lead returned from these workings; this ground is now added to your mine. The men who worked in this mine last year, there is a fine course of lead to be seen in the bottom level where the water is drawn out. In order to accomplish the above work, a reservoir should be made and a larger water-wheel erected for pumping. The present wheel on the mine could then be used for drawing and crushing, which would be a great saving to the mine in coals.

HALKIN DEEP LEVEL.—Jan. 19: There is no material change to notice in the above mines since our last report. The lode in the deep level, going south-west on the deep level vein, is about 16 in. wide, principally composed of spar, and showing some good strong spots of lead ore; the ground is rather hard for driving. In the 174 yard level, east of junction, on the Pant-y-Gow vein, at a point about 30 yards east of the junction, we have re-opened a winze below level 13 yards 1 ft., which is the bottom of the old workings; we find the lode all the way to the east and west of the winze. In the bottom of the old workings there is a poor floor of black limestone, with a thin bed of shale about 2 in. thick, which almost cut off the lode at that point; we have sunk about 4 ft., and we are now getting into white limestone, with a lode about 14 in. wide, consisting of spar and blende, producing good stones of lead ore, and looking promising; we shall prepare to sink some 5 or 6 yards, and then drive east and west to prove the lode in length. The deep level has drained this ground quite dry. There is no particular change to notice in the cross-cut driving south in the 156 yards level, from Pant-y-Gow shaft; the ground is all we could wish for a nice white limestone, containing strong spots of lead ore, and blende, and should we cut into a rich lode at this point soon. The stope below the 110, north of shaft, on Pant-y-frith vein, is producing saving work.

HINGTON DOWN CONSOLS.—James Richards, Jan. 22: Bailey's Shaft: At the 150 the cutting of plat is approaching completion, the lode continuing to produce a little of both tin and copper ores. In the 140 west, on the north part of the lode, the lode is worth 30s. per fathom. In the stope in back of the 140 the lode continues worth 40s. per fathom. In the 120 west the cross-course is still being cut into. In the stope in back of the 120 west, east of Griffin's winze, the lode is worth 15s. per fathom. The lode in the stope in back of the 120 west, and west of James's winze, is worth 12s. per fathom. In the 110 west the lode is still composed of capel, quartz, peach, and a little tin and copper ore.

LLOGAN.—R. Pryor, Jan. 20: The shaftmen are making fair progress with the cutting down of the engine-shaft, and the ground is of a little more favourable nature than when last reported on. The whole of our surface work is being vigorously pushed forward, and the carpenters and masons will have the roof on the engine-house.

LADY BEACONSFIELD.—Capt. Wasley, Jan. 21: The ground in the sump at the bottom of the engine-shaft level is a little easier for sinking, and the lode more promising than last week.—Sharp's Shaft: There is no change here since last week.—Rector's Hobby Shaft: The men are making good progress in sinking, and the lode is looking very promising and producing some really fine lumps of ore. Quarry Shaft: I have put the men to sink a sump in the bottom of the level where the lode is looking favourable for ore.

Jan. 22.—I have this day seen some really splendid specimens of lead ore and spar from Sharp's shaft, and am confident we shall soon be in an excellent run of ore.

LADY CONSTANCE.—Capt. Wasley, Jan. 21: Katie's Shaft: There is an alteration in the ground since reporting on last week, and fair progress has been made with the sinking. I hope to be able to commence dressing ore at the new dressing-floors in a day or two. The masons are getting on well with engine-house, &c. West of the engine-shaft, the ground in the 60 yard level east is worth 10s. per fathom, but the lode is looking much more promising than last week, and is producing some fine lumps of ore, and I think we are passing over a good run of ore. The ground in the 60 yard level west is still favourable for driving, but we are only getting a few lumps of ore at present. The stopes in the bottom of the 60 yard level is producing more ore than last week.—Old Silver Rake: I have set six men on here to do a lot of sundry work, on a contract at 40s.

LADYVILL.—A. Waters, Jan. 22: The mine is without material change to notice since my report of last week. The 18, south engine-shaft, continues to go forward in a soft lode, which is well charged with splendid solid lead ore.

NEW CROWN HILL.—Release, Jan. 20: The lode in the 20, driving west of engine-shaft, is 4 ft. wide, and worth 9s. per fm., the end was re-set at 90s. per fm., stent the month. The lode is much the same as when reported on for the general meeting.

NEW GREAT CONSOLS.—R. Pryor, H. Bennetts, H. Tregoning, Jan. 20: The stopes and tutwork bargains maintain their respective value, and there has been no change in any of our underground operations worthy of remark since last week's setting report. Our surface work is progressing very favourably, and our machinery is working well.

NEW HENDRA.—R. King, Jan. 22: The lode in the 20 east is producing good work for tin, lode of a very kindly appearance; it is composed of peat and priam, and looks promising for a good improvement. The men have commenced stopping the back behind the end; these stopes are also producing good tinstuff. We are now in a position to increase our returns; the water throughout the mine is very moderate, particularly at this season of the year. The engine is draining the mine very comfortably, and I think will continue to do so through the winter with our present lifts.

NEW ROSEWARNE.—E. Hosking, W. Bennetts, Jan. 17: Setting Report: The 104 to drive west of Bickford's shaft, by six men, at 10s. 10s. per fathom; the lode is 5 ft. wide, and worth for tin 12s. per fathom; it is also producing some good copper ore. The 104 to drive east, by four men, at 10s. 10s. per fathom; the lode is 4 ft. wide, and worth 10s. per fathom. The 104 to drive west of Pool's shaft, by four men, at 10s. 10s. per fathom; the lode is 2½ ft. wide, and produces a little ore and tin. The 46 to drive west of Pool's shaft, by four men, at 7s. 10s. per fathom; the lode is worth 8s. per fathom, and the ground is much easier for driving. We have set 10 pitches, to 36 men, at tributes varying from 10s. to 34s. 4d. in 12, the tributers to be paid at the rate of 60s. per ton for black tin.

NEW WEST ROSEWARNE.—John Curtis, Jan. 21: Lead's flat-rod shaft is sunk 15 ft. below the 10 fm. level; lode 3 ft. wide, 10s. per fathom. In the 10 fm. level end, east of the shaft, the lode is 4 ft. wide, and worth 10s. per fathom. The stope in the back of this level, east of the winze, is worth 20s. per fathom. The stope west of the winze is worth 15s. per fathom. In the 10, east of the cross-cut, on the south lode, it is 4 ft. wide, worth

the roof and closing it all up. We do not see much change worthy of remark in any of the different bargains in the mine that are being operated upon since our report of the 7th inst. If anything, the stopes are better improved.

PEDNAN-DREA UNITED.—W. Tregay, W. Pridaux, John Pope, Jan. 17: Sump: The water is now pretty quick, but we have no difficulty in keeping it, yet the sumpmen cannot make so good progress in sinking as when the water is easier. In the 140 east the pitch in the bottom of this level is just as last report, the lode being worth 40¢ per fathom. In the 140 west the lode (Martin's) is worth 20¢ per fathom. In the 130 west the lode (Martin's) is worth 10¢ per fathom. In the 120 west the lode (Martin's) is worth 15¢ per fathom. In the 110 west the lode (Martin's) is worth 10¢ per fathom. In the 80 west the lode (north) is worth 10¢ per fathom. In the 80 east the lode (north) is worth 10¢ per fathom. In the 70 east the lode (north) is worth 10¢ per fathom. In the 70 west the lode (north) is worth 10¢ per fathom. In the 60 west the lode (north) is worth 10¢ per fathom. In the 60 east the lode (north) is worth 10¢ per fathom. In the 50 west the lode (north) is worth 10¢ per fathom. In the 50 east the lode (north) is worth 10¢ per fathom. In the 40 west the lode (north) is worth 10¢ per fathom. In the 40 east the lode (north) is worth 10¢ per fathom. In the 30 west the lode (north) is worth 10¢ per fathom. In the 30 east the lode (north) is worth 10¢ per fathom. In the 20 west the lode (north) is worth 10¢ per fathom. In the 20 east the lode (north) is worth 10¢ per fathom. In the 10 west the lode (north) is worth 10¢ per fathom. In the 10 east the lode (north) is worth 10¢ per fathom.

PENNERLEY.—W. T. Harris, J. Delbridge, Jan. 21: Engine-Shaft: The lode in the rise in the 130 east is a rich course of lead, equal to anything yet seen in this level. The rise is 3 fms. long and 6 ft. high, worth 9 tons. The lode in the winze sinking below the 80 continues worth 3 tons of lead per fathom. No alteration in the winze sinking below the 80. The lode in the 70, driving east, is 6 ft. wide, composed of carbonate of lime, blende, and lead ore, a promising lode. The lode in the 60, driving east, is 6 ft. wide, composed of carbonate of lime, blende, and lead ore, a promising lode. The lode in the 50, driving east, is 6 ft. wide, composed of carbonate of lime, blende, and lead ore, a promising lode. The lode in the 40, driving east, is 6 ft. wide, composed of carbonate of lime, blende, and lead ore, a promising lode. The lode in the 30, driving east, is 6 ft. wide, composed of carbonate of lime, blende, and lead ore, a promising lode. The lode in the 20, driving east, is 6 ft. wide, composed of carbonate of lime, blende, and lead ore, a promising lode. The lode in the 10, driving east, is 6 ft. wide, composed of carbonate of lime, blende, and lead ore, a promising lode.

PERRAN CONSOLS.—J. Juleff, J. Nance, Jan. 21: The 40 cross-cut, east of Hallett's, has just intersected a part of the lode, which is producing a little tin, and we expect shortly to intersect the main part. In the 20 cross-cut, south-west of Hallett's, we are still pushing it on to intersect the south or principal part of the lode, which we think will prove productive. In the 40, west of flat-roof shaft, we have taken down some of the south part of the lode, which will produce 2 qrs. of tin to the ton of stuff, and as soon as we can get men we shall cut through it to prove its value; we look at this as an important point. In the 40, east of flat-roof shaft, we are driving on the north or soft part of the lode with speed, and in taking down the main part beyond the present level, we think it worth 25¢ per fathom, and it seems to be getting into a first class run of tin ground.

PHENIX (Silver-Lead).—R. Pryor, E. Adams, Jan. 20: We continue to make good progress with the sinking of the engine-shaft below the 60, and the lode therein continues of the same kindly nature as when last reported on, producing 21 cwt. of lead per fathom. The other bargains throughout the mine are without any noteworthy change since our last report.

PLYNTHIMON.—J. Garland, Jan. 19: Consequent on the late heavy falls of snow and rain, nothing has been done in the 24, east of engine-shaft, since last report, the water being in; this I hope to get in for again in a day or two. Good progress has been made in the rise over this level; I hope to communicate same with the winze in about one month, when the men will at once commence rising against the new shaft. The men from the cross-cut in the 12 fm. level and I have placed to stope on the new lode (west of cross-cut towards the north lode) to prove same as it goes up towards the adit, and should it improve as I anticipate I would advise the commencing of a cross-cut north from the adit level, in order to open same as speedily as possible. Nothing has been met with in the cross-cut towards the north lode as yet. In the stope over the 12, west of Williams's winze, the lode produces about 12 cwt. of lead ore per fathom. In the stope over same, east of cross-course, the lode yields 15 cwt. of lead ore per fathom. A stope east of last produces 1 ton of lead ore per fathom; the stope east of ditto yields 15 cwt. per fathom. A stope in the bottom of the 12, west of engine-shaft, produces 10 cwt. of lead ore per fathom. In the winze sinking below the 12 fm. level, 20 fms. east of new shaft, the lode continues without change since last report, worth 20¢ to 25¢ per fathom; this winze is down about 9 ft. below the bottom of level. The adit level, east of cross-cut, is getting into settled ground, and an improvement may be shortly expected. The same level, west of cross-cut, is now opening out a fine piece of ore ground, producing 1½ ton of lead ore per fathom; judging from the water issuing from the roof of the level we may reasonably hope that the ore ground will hold up to a good height over same, which will give stopping ground for some time. Two ton of lead ore per fathom, the lode in the 10, west of engine-shaft, produces 10 cwt. of lead ore per fathom. The weather of late having been very wet and stormy has kept back all surface work. The next sampling, of 40 tons, will take place on Saturday next, the 24th inst., of which I will advise you as usual.

POLROSE.—S. J. Reed, Charles Bottrall, Jan. 23: The accident caused to our pumping machinery by the breaking of the crank has been made good, and we are glad to say we commenced to drain below the 30 last night. The prospects of the mine are good, and the lode in the 50 east is worth 30¢ per fathom.

PRINCE OF WALES.—J. Gifford, F. Phillips, Jan. 20: In the 90 east the lode is full of lead, worth 20¢ per fathom for tin and copper. In the 90 west there is no change since last report. The lode in the 80 west is worth 8¢ per fathom for tin and copper. In the 65 east we are driving by side of the lode, which we shall begin taking down in the latter part of the week. The same remark will apply to the rise in back of this level. Silver Lode: In back of the 10 below the adit the lode is improving, and yielding saving work. No other change throughout the mine.

QUEEN'S (Silver-Lead).—E. Evans, Jan. 21: Gladstone's shaft is now repaired, and we are winding debris daily; we expect to have the bottom of the 140 yard level cleared this week. The new lode in the 80 yard level is still very promising, and producing a fair quantity of lead daily. The lode in the 70 yard level is also very promising, and is gaining strength as we proceed; we have now 15 ft. of mixture of lead, spar, and clay—which comes down to the bottom of the level. We have driven through the ground 6 yards. I shall wind a lot of lead on Monday next, and commence dressing same at once. I have obtained the services of a first class washer, and expect to have a parcel ready for next sale at Holywell. I would recommend that six men be put on the 100 or 120 yard level at once.

ROMAN GRAVELS.—A. Waters, Jan. 22: The 95, south of the engine-shaft, is worth 45¢ per fathom; this end is now south under where the lode in the 80 first began to yield, and it may be said, therefore, that the great runs of ore ground in the mine are all before the said 95 level. The lode in the 80, south of No. 3 winze, is worth 60¢ per fathom. No. 2 winze, below the 80, south, is worth 40¢ per fathom. The middle level, south of No. 3 winze, below the 65, is worth 45¢ per fathom. The middle level, south of Corfield's, below the 65, is worth 80¢ per fathom. The 65, south of No. 2 winze, south of Corfield's, is worth 60¢ per fathom. The Sawpit lode is passing through the Roman vein in the above end, and the east side of the latter vein does not look quite so rich for ore as of late, but when explored on the south or through the Sawpit we expect the Roman lode will be more productive than ever. The stope in back of the 95 level, which has been reported to have sold 230 tons of lead ore, is worth 15¢ per fathom.

ROSEWALL HILL AND RAMSON UNITED.—W. Bagelhol, John White, Jan. 22: Standard Lode: The lode in the 60, east of Ramson shaft, is 18 in. wide, worth about 5¢ per fathom. The lode in the 60, west of sump shaft, is 18 in. wide, yielding a little tin, but not enough to value. We are pushing on this end with all speed towards Penberthy's slide, where we expect to find a productive lode. —Wheat Mary Lode: The lode in the 90, east of the cross-course, is looking better, now 6 in. wide, and worth 5¢ per fathom. The 100 fm. level west on this lode is unproductive. —Wheat Mary Lode: The lode in this carbons, in the back of the 100, is not quite so well as when last reported on; now worth 60¢ per fathom. The lode in the bottom, however, is looking better, now worth 50¢ per fathom. This lode of tin is lengthening to the westward very rapidly, and is, in our opinion, the main part of the lode. Nos. 2 and 3 crossings, east of the Carbons, have fallen off since our last report, and are now worth 20¢ per fathom. —Middle Lode: The lode in the new flat-roof shaft is looking very well, and is now 2 ft. wide, and worth 20¢ per fathom. The 15, west of cross-cut, is worth 8¢ per fathom, and east of cross-cut 12¢ per fathom. We have now opened 7 fms. on the course of this lode, and am very pleased with its appearance, and we think from present prospects we shall open out a good mine. There is no change in our cross-cuts.

ROSEWARNE UNITED.—E. Hosking, W. Bennett, Jan. 22: We have had to make a stronger connection at the adit level, which has delayed the forking of the mine a little; it is now completed, and the engine is working as usual. There is no change in the bargains since the report for the meeting.

SOUTH CONDURROW.—Jos. Vivian and Son, H. Abraham, Jan. 20: West Basset Lode: In the 103, west of King's shaft, the lode is 1½ ft. wide, yielding a little tin. In the 93, west of King's shaft, the lode is 2 ft. wide, yielding a little black copper and tin. —Tin Lode: In the 82, west of King's shaft, the lode is 5 ft. wide, and worth about 25¢ per fathom. In the same level, east of cross-cut, the lode is 5 ft. wide, and worth about 17¢ per fathom. In the 71, east of King's shaft, the lode is 5 ft. wide, and worth about 15¢ per fathom. In the 60, east of King's shaft, the lode is 5 ft. wide, and worth about 15¢ per fathom. In the 50, east of King's shaft, the lode is 5 ft. wide, and worth about 15¢ per fathom. In the 40, east of King's shaft, the lode is 5 ft. wide, and worth about 15¢ per fathom. In the 30, east of King's shaft, the lode is 5 ft. wide, and worth about 15¢ per fathom. In the 20, east of King's shaft, the lode is 5 ft. wide, and worth about 15¢ per fathom. In the 10, east of King's shaft, the lode is 5 ft. wide, and worth about 15¢ per fathom.

SOUTH GREAT WORK.—S. J. Reed, Jan. 21: There is an improvement in the 10 fm. level, west of engine-shaft; the lode is 2 ft. wide, worth 11¢ per fathom. This end is now approaching the run of tin ground formerly worked on, probably 40 years since, where it is said a splendid lode had gone down. In the 35 fm. level, east of flat-roof shaft, the lode is 4 ft. wide; worth 9¢ per fathom. The western division has been in a good lode for several fathoms, and is now worth 14¢ per fathom. I consider the prospects of the mine for deeper sinking were never so good as at present, as the bottom level has much improved beyond anything that has been seen in the level above. The last sale of tin for four weeks was 3 tons 2 cwt. 3 qrs. 15 lbs.

SOUTH MERLYN.—R. Rowlands, Jan. 22: In the 120 yard level north the lode is 3½ ft. wide, composed of nice spar, clay, and lumps of ore, and by appearance it will be strange if we do not soon meet with a strong course of ore. In the 100 yard level the lode is 4 ft. wide, sounding very loudly, and letting out water. We have 12 in. of nice gravel, sand, and lumps of ore. The dressing is going on satisfactorily.

SOUTH PHENIX.—J. Kelly, Jan. 20: Pearson's Shaft: Grace Dieu Lode: We have cut through the lode at an angle, and find it to be 19 ft. wide, composed principally of peach, containing mudiic and tin, the latter I consider to be good stamping work; this is a very fine lode indeed, and being so large I have no doubt will be a good paying lode. I cannot value it at present, as there is so much mudiic with the tin, but we are erecting a burning house, when I hope shortly to be able to give you a correct estimate of its value. The shaftmen are cutting the flat at the 30, and we shall resume sinking with all speed as soon as possible. —Hazeldeine's Shaft: In Greenhill lode, driving east at the 20, the ground is hard, and the lode small and poor. The stopes in the bottom of the 10, east of

shaft, are yielding good work for tin. The stopes west of shaft, at the 10, are producing good work for tin. The masons are making good progress with the burning house, and if the weather is favourable we shall be able to light the oven in about three weeks. All the machinery is in good working order.

SOUTH ROSKEAR.—W. Skewis, J. Brenton, Jan. 20: Gregory's Shaft: The men are now dropping a lift to the 110. We are making good progress in fixing skip-road in sump-whim-shaft. The skip-road in western-whim-shaft is complete to the 80, and slant rollers put in at the 60 and 80. We have ascertained that Duncan's shaft is now clear to the bottom of mine. We are now drawing tributaries of stuff from the 20 and 30 at Vivian's shaft. The 28 in. winding-engine has been set to work, and it draws the kibble with the greatest ease. We shall be ready to sell a parcel of tin by end of next week.

SOUTH TOLCARN.—J. Vivian and Son, J. Paull, Jan. 20: In the deep adit level, west of the cross-course, we are driving by the side of the lode, for the purpose of making greater speed, but shall strip down the lode in time to report its appearance next week. The masons have now to build the brickwork about the cylinder, and to plaster the engine-house inside. The carpenters are getting on well with the flooring, doors, windows, stairs, &c., of the engine-house.

ST. AGNES CONSOLS.—W. Vivian, Jan. 22: The shaftmen will complete the cutting of the plat in the 60 in. level, and we shall resume the sinking of the shaft below the 60 in the coming week. We propose to sink the shaft 12 fathoms deeper, and then to drive a cross-cut south to intersect Wheal Kitty flat lode. If the ground continues in the shaft as it has been up to the present time we may expect to intersect the lode in the 72 by a cross-cut south, about the end of the present year. We have every reason to expect a good course of tin in the 72, as they are now working on good courses of tin above and below this level in Wheal Kitty, near our eastern boundary.

ST. JUST AMALGAMATED.—Richard Pryor, Thomas Richards, William Bawden, Jan. 22: The shaftmen are getting on well with the cutting of plat in the 120 and will soon complete the same, after which no time will be lost in resuming the sinking of Savall's engine-shaft below the 120. The lode in No. 2 winze, in bottom of the 110, has a little improved, and is now worth fully 30¢ per fathom, with a good appearance. Other places throughout the mine continue as when reported on in our setting report.

SUCCESS, RUSHY CLIFF, AND NANCY CONSOLS.—H. Francis, Jan. 22: We are progressing favourably with the sinking of Nancy shaft; the ground here is precisely of the same character as that in the upper section (over the deep adit) of the great Eton Mine, being composed of alternate beds of blue limestone and chert; the vein at present is composed of branches of barites, bearing occasional small veins of silver and copper. The vein in Rushy Cliff adit is much the same as last reported, being thickly and evenly covered with a fine coating of silver; the ground has become much harder for driving, at the same time it is more congenial for bearing ore than that driven through for the last 8 fathoms.

TAMAR CONSOLS.—G. Rowe, Jan. 21: The lode in the drive, east of the engine shaft, is of the same general character as described in my former report, being 1 ft. wide, composed of spar and mudiic, mixed with occasional stones of blende and silver lead ores. The drive east from the trial shaft, on the manganese lode, is progressing so fast as the nature of the work will admit through a large lode, and in this season of the year quick water, which we hope will improve.

TANKER LLE.—A. Waters, Jan. 22: The lode in Watson's shaft, below the 140 is of a strong and mostly the character of white soft carbonate of lime and solid lead ore. We are on the eve of a change for the better in the bottom of the shaft, the lode having made a great turn off again under the hanging-wall. More on this subject next week. Other points just as they were last setting-day.

TREGARDOCK.—J. Spargo, T. Spargo, Jan. 21: The lode in the deep adit, driving towards the junction of Nos. 2 and 3, continues to yield good lead. The stopes in the roof of this level are yielding splendid work for market. The surface work is going on as fast as the small staff of men will admit. Other parts of the mine are without alteration.

TRELEIGH WOOD.—E. Hosking, John Harris, Jan. 21: The following bargains have been made: The 44, west of the cross-course, by six men, at 8¢ per fathom; the lode in the end is producing stamping work. In the 44, west of the engine-shaft, we have been cross-cutting through the lode; the lode in the end has very much improved, a small parcel drawn from it produced 6½ per cent.; but the engine being idle some hours on Saturday and Sunday last caused the water to rise, so that nothing has been done in the end for some days; we expect to resume driving to-morrow. To drive the 44, east of the cross-cut, to engine-shaft, on the north part of the lode, by two men, at 5¢ 10s. per fathom; this is to get under the stope working below the 34 east of the engine-shaft. We expect an improvement in the end as we drive east. At present there is nothing in the end to value. To stope the north side of the 44, west of the engine-shaft, by four men, at 9s. per ton; lode worth 11¢ per fathom. To stope the bottom of the 34, east of the engine-shaft, by six men, at 6s. 6d. per ton; lode 6 ft. wide, and worth 12¢ per fathom. To stope the north side and back of the 34, east of Harris's winze, by eight men, at 7s. per ton; lode 8 ft. wide, and worth 28¢ per fathom. To stope the back of the 34, west of Harris's winze, by 10 men, at 6s. per ton; lode 12 ft. wide, and worth 40¢ per fathom. To stope the back of the 34, west of engine-shaft, by four men, at 4s. per ton; lode 10 ft. wide, and worth 10¢ per fathom. To stope the north side of the 34, west of Nut Bottom shaft, by four men, at 6s. per ton; lode 8 ft. wide, and worth 8¢ per fathom. To stope the bottom of the 24, west of the cross-course, by four men, at 6s. 6d. per ton; lode 6 ft. wide, and worth 7¢ per fathom. To stope the back of the 24, west of the cross-course, by six men, at 5s. per ton; lode 9 ft. wide, and worth 8¢ per fathom. To stope above the 24, east of Windmill shaft, by five men, at 5s. 6d. per ton; lode worth 7¢ per fathom. To stope the bottom of the 24, west of Nut Bottom shaft, by four men, at 5s. per ton; lode worth 10¢ per fathom. To drive the 24, east of Windmill shaft, by two men, at 12¢ per fathom; lode 6 ft. wide, yielding stamping work.

TRELEIGH WOOD UNITED.—James Brown, Jan. 22: We are making good progress in preparing and fixing the lift from the adit to the 40. We have to drop about 50 fms. of main rods to complete this work; we are pushing this on with all speed. The tuskwork bargains are of about the same value as last reported. Full report next week.

TYLLWYD.—John Paull, Jan. 22: We have during the last few days opened one of the old levels; in the bottom of same we have an old winze about 8 ft. deep, containing a lode 2 ft. wide, which will yield good saving work. At present we are laying it open, and, if found to be going down and improving, we propose to bring on the level below, which is some fathoms behind this point, when, in all probability, we shall lay open some profitable ground in addition to what we have already in this section of the mine. All other points much as usual. Surface work going on well, for which at present we have no other work to do.

VAN CONSOLS.—J. Roach, Jan. 22: Although the 75 is not yet in of importance, still the lode to-day presents appearances—crystallized lime spar, cubes of lead, and sulphur—that lead us to expect a course of ore daily. We are now near the great band of griststone in which there was so much ore found in the 10. The lode in the 60, east of Gundry's, is upwards of 15 ft. wide, and contains ore from wall to wall, yielding 5 tons per fathom, and we think from the improved character of the ground that it will continue; the ore is very strong in the bottom of the level as well as in the roof. The cross-cut from the bottom of No. 1 winze is now driven 18 ft.; the contact branches of ore, but we have seen no south-west yet. The lode in the 2 winze, below the 60, has just struck the footwall of the lode, which is disseminated with lead throughout. In the 45, east of Little's, the lode has improved, and is now yielding good stones of lead. The winze sinking under the 35, west of rise, is without material alteration. The stopes in the roof of the 60, east and west of winze, are yielding 2 tons of ore per fathom. You will see from the above report that our prospects have greatly improved in the 60 east, and will, no doubt, lead to great riches. The dressing is going on as fast as possible.

VAUGHAN.—Jan. 20: Engine-Shaft: The lode in the 32 east is the width of the end, chiefly composed of a blue clay-slate, carbonate of lime, and spar, showing small lead ore. This point will soon enter the run of ore ground driven through the level above the 32 of the lode being carried is about 1 yard wide, improved in appearance, containing small branches of lead, but not sufficient as yet to set a value on. In the deep adit level east the ground continues stiff for progress, being composed of a light clay-slate, beds of grit, and branches of carbonate of lime. In the deep adit level east, on south lode, at Fronferig, the lode is from 4 to 5 ft. wide, and is becoming more settled; unproductive for lead. The pumping-wheel and pitwork are in good working order, with a full supply of water.

WEST CARADON.—N. Richards and J. Pryor, Jan. 21: Allen's lode, at the 55 fm. level, east of Hallett's cross-course, although only 18 in. wide, is producing good stones of ore. The lode in the back of this level will produce 2½ tons of copper ore per fathom. Three stopes in the back of this level will produce 1½, and 2½ tons per fathom respectively. In the 42 cross-cut north we now just picked into what we believe to be Allen's lode; should this be the case we shall at once commence driving west, and calculate we shall have to drive about 13 fms. to communicate with the rise from the 55, which is nearly up to this or the 42 fm. level: this will not only give us good ventilation, but will also enable us to take away the ore between those levels to a greater advantage. The lode in the 30 fm. level, east of shaft towards Hallett's cross-course, is a larger and more improved in appearance, and is now yielding good stones of ore, which we are able to say more about it as we proceed, and will keep you well advised.

WEST CHIVERTON.—J. Juleff, R. Nancarrow, W. Nicholls, Jan. 22: The 140, east of new engine-shaft cross-cut, is worth 15¢ per fathom; and west the lode is worth 15¢ per fathom. We are still cross-cutting south to intersect the south part. The 130, west of new engine-shaft, on the south lode, is worth 10¢ per fathom. The 130 west, on the north part, is worth 10¢ per fathom. The 130, east of cross-cut, on the north part, is worth 15¢ per fathom. In taking down the middle part of the lode east of this cross-cut the lode is worth 20¢ per fathom. The 130, east of Burgess's, on the middle lode, is worth 10¢ per fathom. The 120, west of Burgess's, on the north lode, is worth 10¢ per fathom. The 140, west of Hawkes' cross-cut, is worth 10¢ per fathom, and east of the same value. We are glad to say the stopes have improved since our report for your quarterly meeting.

WEST ESKAIR LLE.—R. Harvey, Jan. 21: Eastern Mine: During the past week the shaftmen have been engaged cutting elstern, fixing lift in same, and putting in penhouse; the whole of this work is now completed, and sinking is now resumed with full vigour. I may add that in cutting the elstern in the bottom of the 24 fm. level east we broke some fine stones of lead ore, which we are strengthening the idea that we are on the top of a rich course of ore, which I believe will be verified at the next level. Western Mine: There is no change calling for remark in any of the underground workings since last report. Drawing and dressing proceeding as usual.

WEST GOLDFIELD.—John Pope, jun., Jan. 21: Caunter Lode: The Pressure shaft is sunk below the 50; the lode in the bottom of the shaft is 18 in. wide, worth for the length of the shaft 12¢ per fathom. The lode in the 50, driving north-west of Pressure shaft, is 2 ft. wide, saving work for tin. The lode in the stope in the back of this level is 3 ft. wide, worth 12¢ per fathom. The lode in this level, driving south-east of Pressure shaft, is 18 in. wide, worth 5¢ per fathom. I calculate this level is within 9 or 10 ft. of Pink Lode. The lode in the stope in the back of this level is 3½ ft. wide, worth 20¢ per fathom. The lode in the 40, driving north-west of Pressure shaft, is 2 ft. wide, worth 6¢ per fathom. The lode in this level, driving south-east of Pressure shaft, is 18 in. wide, worth 4¢ per fathom. Lode in winze sinking in this level is 3 ft. wide, worth 15¢ per fathom. Lode in the 20, driving south-east of Pressure shaft, is small. The lode in new shaft sinking below the deep adit level is disordered with a floor of spar. No change to notice in the stope in the back of the shallow adit level south-east of Vivian's shaft. —Pink Lode: The lode in the 40, driving east of the caunter, is improving again; towards the bottom of the level it is 9 in. wide, producing good stones of tin. The lode in the winze sinking in this level is 18 in. wide, worth 15¢ per fathom. The lode in this level, driving west of the caunter, is 2 ft. wide, worth 5¢ per fathom.

WEST GREAT CONSOLS.—R. Pryor, H. Vial, Jan. 20: There is no alteration in the ground in Broadgate engine-shaft; it continues quiet as favourable for progress as when last reported on. All things at surface are going on well.

WEST GREAT WORK.—S. J. Reed, Jan. 22: We are proceeding well with the sinking of the flat-roof shaft below the 16. We are now 6½ fathoms below that

level; the lode is 2½ ft. wide, and worth 18¢ per fathom. In the 16 east the prospects are good; lode worth 14¢ per fathom, and improving. The rise in the back of the 16 west is up 2½ fathoms; lode 2 ft. wide, and worth 16¢ per fathom. I consider the prospects were never equal to the present.

WEST MARIA AND FORTESCUE CONSOLS.—W. Skewis, Noah Coward, Jan. 22: Willesford's Shaft: The men are now sinking by the side of the lode. In the 93 west the men are driving by the side of the lode; it will be taken down next week, and we hope from appearances to be able to report it equal to value when last taken down. —North Lode: The lode in the 82 west has been cut completely through since last report; it is 4½ ft. wide, with a horse of kyllas in the middle, and composed of capel, quartz, mudiic, and a little copper ore, letting out a good deal of water. The stope in bottom of the 71 west is worth 20¢ per fathom. The stope in the back is worth from 20¢ to 25¢ per fathom.

WEST TANKERVILLE.—Arthur Waters, Jan. 22: South Boundary: We are cross-cutting to the lode in present bottom of the shaft, and hope to get into it and uncover a rich course of lead in course of the next few days; we are certain of finding the lode rich at the above point. In the 50, driving south of the winze (and which end is now within 6 ft. of the north end of the above shaft), the lode is worth for lead 75¢ per fathom. In the 50, coming south from Roman Gravel boundary, the lode is yielding good stones of lead ore. The 45, south of shaft, is worth 60¢ per fathom. The stope in back of the 46, 10 fms. behind the end, is worth 30¢ per fathom. The stope in the 35 south, is worth 22¢ per fathom. We find that the old men have worked far more extensively against the shale in length and depth than we were led to suppose. They must have had, we think, a great run of ore, for the whole of the lode is gone from surface down against the shale as deep as the 45 at least. We shall soon be in a position to clear up to the bottom of the said old workings, and are looking forward to finding a good thing. Our 46, now 20 fms. from the old men's main sump, showing a lode to-day worth 40¢ per fathom, speaks well for the future. We shall sample again next week.

WEST WHEAL GOLAND.—J. Mayne, Jan. 22: The various points in operation on the north and south lodes continue to yield their usual quantities of tin. Messrs.: We are now making good progress in sinking the shaft, and find the lode increasing in size, and getting more of the character for tin than we have seen above. In the 32 driving west we have not got off from the influence of the elvan altogether, but hope to do so soon, as it still eases; when the work is done I will inform you of the value of the lode. I may add that the indications for a good lode are now more encouraging than they have ever been while driving through the elvan. The machinery throughout the mine is in good order and working well, and the dressing is being carried on with all dispatch.

WEST WHEAL GOLAND'S.—Jan. 20: The water is in fork, and everything in Taylor's shaft is in good order; the men in the bottom of shaft are working well, so we hope to make a little progress in future. The men in the 125 end are driving in kyllas, which appears to be improving. There is no alteration in any of the other bargains at this shaft except in the 85 end west, which is improved very much, and is now yielding 3 tons of ore per fathom—a very pretty lode. The 55, west of Richardson's shaft, is yielding 1 ton of ore per fathom; the lode appears to be widening, but does not improve for ore. The 55 end east is also larger; a lode came out from the south, which has increased its size, but we cannot see that it is yielding more ore as yet; it is a good lode, yielding 4 tons of ore per fathom. There has not been much done in the 45 east yet in cross-cutting the lode under the winze in the 55. The other bargains are without alteration. The men from Richardson's shaft are now employed in cutting a plat in the 40 for a new balance bob. We sampled to-day 449 tons, in seven parcels.

WHEAL ARGUS.—Capt. Trahair, Jan. 22: The lode in the stope in the bottom of the 30, west of winze, is 18 in. wide, worth 4¢ per fathom; set at 50s. per fm. The men are now putting in skip-road from the 30 to the 35; as soon as this is completed we shall be able to discharge the work from these stopes as we go down. The lode in the back of the 30, west of skip-shaft, on Elisha's lode, is 12 ft. wide, worth 90s. per fathom. The lode in the back of the 30, west of skip-shaft, on the Beacon lode, is worth 40s. per fathom. The lode in the 40, east of the Beacon lode, is worth 40s. per fathom. The stope in the bottom of the adit level, west of engine-shaft, is 2 ft. wide, worth 90s. per fathom; set to 40s. per fathom. There is no change to notice in the tribute pitches for the last week.

WHEAL COATES.—W. H. Martin, Jan. 22: The shaftmen completed the plat at the 20, and now sinking below the latter level for bearer and elstern. —Ludder Winze: The lode in the west end continues much the same in value as for some time past. No. 2 winze, at the 20 east and west ends, is opening out good stopping ground.

WHEAL CREBOR.—J. Goldsworthy, Jan. 21: In the 120, east of Cock's shaft, the men are making fair progress in taking down lode, which is full 6 ft. wide, of a favourable description, and worth for copper from 40¢ to 45¢ per fathom. In the stope in the back of the 120 the lode is worth from 35¢ to 40¢ per fathom. In the 108, east of Cock's shaft, the driving is by the side of the lode; the appearances, as the driving proceeds, are of a favourable character, and we anticipate good results when the lode is taken down. In the 72 east the appearances are evidently more favourable than for some time past. There is no change in any of the other bargains this week, no lode having been taken down.

WHEAL GRENVILLE.—E. Hosking, W. Bennett, Jan. 17: The lode in the rise over the 150 is worth 20¢ per fathom. The lode in the 140, west of cross-cut, is worth 30¢ per fathom. The rise above the 150 level is worth 20¢ per fathom. The lode in the north shaft sinking below the 120 is producing a little tin. The lode in the 120, east of north shaft, is 2 ft. wide, and worth 15¢ per fathom. The stope above the 120 east is worth 20¢ per fathom. The lode in the 110 east is 20 in. wide, and worth 8¢ per fathom. The stope below the 110 east is worth 16¢ per fathom. The lode in the 100 east is 2 ft. wide, and worth 8¢ per fathom. The winze below the 100 east is worth 15¢ per fathom.

WHEAL GRENVILLE.—E. Hosking, W. Bennett, Jan. 22: There is no change to notice since our last report.

WHEAL KITT.—S. Davey, J. Williams, Jan. 17: New Shaft: Pryor's Lode: We have nothing new to report in the 142 fm. level cross-cut, driving south. The lode in the 130 fm. level, driving west of shaft, is worth for tin 9¢ per fathom. The lode in the 130 fm. level, driving east of shaft, is worth for tin 8¢ per fathom. The lode in the 118, driving west of shaft, is worth for tin 10¢ per fathom. The lode in the winze sinking below the 118, west of shaft, is worth for tin 11¢ per fathom. The men are still dressing the lode in the 118, east of shaft, but will be taken up against our next report day. The lode in the 106 fm. level, driving west of shaft, is worth for tin 20¢ per fathom. The lode in the 20, driving east of the shaft, is 4 ft. wide, and worth for tin 7¢ per fathom. The lode in the adit level, driving west of eastern boundary, is without change to notice since last advised.

WHEAL MARY.—J. Grigg, Jan. 22: The stamps are working as usual, and I examined the types to-day, and saw that there was good work coming from the stamps. We have got the lift rack at work, and I find that there is good work coming from the slimes, &c. The carpenters will get another rack at work as soon as possible. All that pile of stuff driven back for the straps still contains paying work for tin, which will be returned to the bidders. We shall be able to break work at both ends of the pit now, as they are holed through. We can keep the stamps working as usual, and other things are working satisfactorily.

WHEAL RUBY.—J. Richards, Jan. 21: Since my last lode in the adit level driving west has been yielding some rich stuff, and from assays we find a portion of it to yield as much as 4 c

The Mining Market: Prices of Metals, Ores, &c.

METAL MARKET—LONDON, JAN. 23, 1874.

| COPPER. | | £ s. d. | £ s. d. |
|---|-----------|----------|----------|
| Best selected... p. ton | 92 | 0-94 | 0-0 |
| Tough cake and tile... | 90 | 0-92 | 0-0 |
| Sheeting & sheets... | 90 | 0-97 | 10-0 |
| Boils... | 100 | 0-101 | 0-0 |
| Bottoms... | 99 | 0-101 | 0-0 |
| Old... | 85 | 0-0 | 0-0 |
| Burra Burra... | 91 | 10-0 | 92-0-0 |
| Wire... | 0 | 1-0 | 0-0 |
| Tubes... | 0 | 1-0 | 0-1 |
| BRASS. | | per lb. | per lb. |
| Sheets... | 10d.-11d. | | |
| Wire... | 10d.-11d. | | |
| Tubes... | 11d.-12d. | | |
| Yellow metal sheeting... | 8d.-8½d. | | |
| Sheets... | 8d.-8½d. | | |
| SPELTER. | | per ton. | per ton. |
| Foreign on the spot... | 25 | 10-0 | 28-0-0 |
| " to arrive... | 25 | 10-0 | 28-0-0 |
| ZINC. | | per ton. | per ton. |
| In sheets... | 31 | 10-0 | 32-0-0 |
| QUICKSILVER (p. bot.) | 19 | 0-0 | 19-10-0 |
| TIN. | | per lb. | per lb. |
| English blocks... | £120 | 0-121 | 0-0 |
| Do, bars (in bria)... | 121 | 0-122 | 0-0 |
| Do, refined... | 123 | 0-124 | 0-0 |
| Banco... | 116 | 0-118 | 0-0 |
| Straits... | 114 | 0-117 | 0-0 |
| TIN-PLATES. | | per box. | per box. |
| IC Charcoal, 1st qua. 41 | 17 | 0-1 | 19-0-0 |
| IX Do., 1st quality... | 2 | 3-0 | 2-5-0 |
| IX Do., 2d quality... | 1 | 15-0 | 1-17-0 |
| IX Do., 2d quality... | 2 | 1-0 | 2-3-0 |
| IX Coke... | 1 | 9-1 | 1-11-0 |
| IX Ditto... | 1 | 15-0 | 1-17-0 |
| Canada plates, p. ton... | 21 | 0-21 | 10-0 |
| Ditto, at works... | 20 | 0-21 | 0-0 |
| At the works, 1s. to 1s. 6d. per box less. | | | |
| Terne-plates 2s. per box below tin-plates of similar brand. | | | |

REMARKS.—The markets all round have been unusually quiet throughout the week, and there has really hardly been anything doing; the recent failures in the lead trade still occupying a good deal of attention tend to throw a further gloom in the market, which was not particularly bright before the occurrence. The demand which by some was expected to arise upon the turn of the year has not as yet come, and may in consequence of untoward events be still delayed. Manufacturers are beginning to suffer severely from the continued decline in trade, and it would almost seem a matter of necessity in order to effect a resuscitation that prices should be reduced. Should this lack of orders still continue it must result in a decline in the price of coal and wages, which would then enable sellers to accept offers which under present circumstances cannot be taken without incurring a positive loss.

COPPER.—Throughout the week this metal has been only in very moderate request, and prices have been almost nominal, and have not exhibited more than a fractional variation. On Monday a small parcel of Chili bars, g.o.b., changed hands at 82½ s. cash; Wallaroo, 93½; and Burra, 92½. Ore is quoted 16½ to 16½ per unit. On Tuesday g.o.b. was sold at 82½ s. to 82½ 10s.; Wallaroo, 92½ 10s. to 93½ cash, and 93½ 10s. one month; and Burra, 92½ s. cash. Wednesday's market was confined to a few transactions in g.o.b. at 82½ 10s. cash, and 82½ s. net; and Burra 92½ cash. On Thursday the market appeared a shade firmer. There were buyers of g.o.b. at 82½ 10s. cash, and 50 tons of picked brands sold at 85½; Wallaroo quoted 93½, but before the close of the day there were sellers at 82½ 10s. To-day the market is very quiet, and prices unaltered. The business of the week is limited to about 400 tons Chili bars, and 200 tons Australian. Orders for manufactured are very scarce, and smelters are disposed to submit to trifling concessions. The market for yellow metal is quiet, and prices a shade easier.

IRON.—There is no change to report in the condition of the iron trade of the North of England during the past week. The market has been sustained, but has lacked activity. Sellers of pig-iron show no disposition to make any abatement upon current rates, which are much the same as a week ago. As regards finished iron, the trade shows some small measure of improvement, but the progress is very slow; indeed, were it not for the booking of a few orders for rails it would be difficult to say in what the improvement consisted. Up to the present time there are many works which are only partially employed, and some which have been closed for some time have not yet recommenced operations. Notwithstanding this prolonged discouragement makers are still sanguine that as the spring advances trade will improve, and it is this feeling generally which causes prices to be maintained. The average price of rails is 10½ s., and 13½ 7s. 6d. for plates. The shipbuilding and engineering trades are more active than of late. The yards are generally busy, and prices are firm. It is somewhat disappointing to be building upon hopes of the future rather than present facts, but it seems that hopes are well founded and likely to be realised. The report from South Wales is even less satisfactory than that from the North of England. The works continue very dull, and many are only partially engaged. The maintenance of high prices is supposed to be the cause of this continued determination of buyers to keep out of the market. Were manufacturers to attempt any material reduction in their selling prices, it is said that they would do so at a serious loss, and here, as in the North, the market is sustained by the expectation that if a little patience is exercised orders will come dropping in, and that before very long, in sufficient quantities to afford support to prices. It is confidently believed that Austria and Russia must speedily be in the market. The exports of iron from the South Wales district during last month are barely up to half the usual average—not quite reaching 18,000 tons.

The Scotch pig-iron market opened firm on Monday, and transactions were recorded up to 107½, after which prices declined to 106s. 6d. At the close there were buyers at this price, and sellers at 106s. 9d. prompt. There was not much doing on Tuesday. Quotations stood at 106s. 6s. sellers, and buyers 3d. under. Wednesday's market was very quiet, and the tendency was to lower quotations. On Thursday there was a distinct fall, business having been done down to 105s. At the close there were sellers at this price, and buyers at 104s. 9d. To-day the market has been flat, and business done down to 104s., but at the close there were buyers at 104s. 3d.

| Week ending Jan. 18, 1873. | Tons | 9,270 |
|-------------------------------------|------|--------|
| Week ending Jan. 17, 1874. | Tons | 7,236 |
| Decrease | | 2,034 |
| Total decrease since Dec. 28, 1873. | | 11,724 |

LEAD.—The market has been so upset by the failures reported last week, and the result of the winding-up so uncertain, that but few transactions in this metal have taken place. Good soft English pig has been sold at 23½ 10s., and it is questionable whether any higher price can at the present be obtained. There must sooner or later be let free the stock which has been accumulated by these bankrupt firms; and until this is all disposed of there will, in all probability, be a very undecided market. At any rate, prices are not likely to rise; and inasmuch as these speculative buyers have been the means of fictitiously maintaining the market to a great extent, it is not improbable but that there may be a considerable drop before the market once again resumes its ordinary course.

ZINC.—Out of a parcel of 160 tons London rolled, 80 tons has realised 30½ to 20½.

TIN.—The market has lacked activity, and prices, after having been upheld throughout the week, have at the close given way. On Monday an insignificant quantity of Straits changed hands at 119½ cash. Next day Billiton quoted 120½, at which 5 tons was sold; Australian, 115½; and English, 117½ to 118½. On Tuesday rather more business was concluded, but at irregular prices. Straits was sold at 117½ to 120½ cash; Australian, 115½ to 116½. About 400 tons Australian ore was sold at 2½ 10s. to 17½ 10s. for common; 30½ to 55½ 15s. for fair; and 58½ 2s. 6d. to 72½ 15s. for fine. The highest price obtained was 75½ for one parcel. Some small lots of Barilla sold at 10½ to 65½ s. On Wednesday the market was less active, 119½ was the price for cash; 116½ for forward delivery up to April. Australian, 114½ cash; and for arrival, 110½ 10s. Thursday's transac-

tions were few and unimportant; Straits, 119½; Banca, 121½; Australian, 114½, all cash, and in all not more than 17 tons. To-day the price of Straits has given way, and 117½ is named as the quotation for cash.

TIN PLATES.—There is no change. The market is quiet.

COPPER.—Messrs. James and Shakespeare.—No transaction is reported beyond an isolated lot of 100 tons Chili regulus at 16s. 6d. per unit. In bars we chronicled but 500 tons; consisting almost entirely of good ordinary brands (including Lota and Urmetta) for cash at 82½ s. and 82½ 10s., the sales at the former price being invariably coupled with such conditions as to enhance the cost to the ultimate purchaser by at least 5s. per ton. A small lot, with a fixed prompt of three months, realised 85½ 15s.; and a moderate quantity of picked brands 85½ cash. Australian sorts have been equally neglected, and we note only 75 Burra at 92½ and 92½ 5s. cash; 80 Wallaroo at 92½ 10s. and 93½ cash, and 25 at 93½ 10s. delivery fixed three months hence. Despite the dullness of the trade, the quantity of foreign offering for sale has been small; and though it would be difficult to effect extensive sales at the nominal rates, yet, on the other hand, purchases could not be made, except on a very moderate scale, even at the highest figures on our list. English is tolerably steady, but participates in the general dullness, and a few second-hand lots of raw are offering below smelters' quotations.

TIN.—Makers are open to sell English on easier terms, though leaving their official prices unaltered. Foreign is irregular, and there being large interests at stake both for a rise and fall, business has been reported at a few wide figures. Straits is the article chiefly dealt in on speculation, and the transaction of the week were mostly confined to this description, in which we note about 90 tons at 120s. down to 117½ cash, and 65 tons for arrival or forward delivery from 118s. down to 115s. per cwt. At the close it was difficult to name the exact quotations, but those we give represent the market as near as possible to ascertain its position yesterday evening. Of Australian we believe about 50 or 60 tons have sold from 116s. down to 114s. per cwt., the whole of which was taken for consumption or export.

REVIEW OF THE AMERICAN LEAD TRADE FOR 1873.

The most salient feature of the lead market in 1873 is the increased use of American lead for all purposes except corrodion, and the consequent decrease in the importation of ordinary foreign lead, which has been counterbalanced by a largely augmented home production. While Missouri has produced a little more than in previous years, and Galena its usual amount, the Nevada and Utah mines have been greatly developed, and worked with unprecedented energy. The percentage of gold and silver in the bullion produced by mines in these last-named territories is so high that the lead is of secondary consideration, so that the inducements for investing capital to work the mines of the Far West, and the probabilities of continued development, are greater than ever before; furthermore, within the past 18 months several new smelting and desilvering works have been erected, so that all the base bullion produced during the coming year can be readily worked. It is also of interest to note that our very best Eastern white lead manufacturers have controlled several brands of desilvered American lead, and although the results have not been absolutely satisfactory, they have nevertheless given proof of such marked improvement, and have so nearly fulfilled all requirements, as to inspire the hope that at no distant day our lead will compete with the very best German and English refined brands, and that we shall rely solely on domestic resources for all qualities of pig-lead.

At the beginning of 1873 the stock of pig-lead in the New York market was estimated to be about 5000 tons, of which some 1500 tons were foreign lead. Early in March the bulk of the lead was concentrated in a few hands, and prices were advanced from 6½ cents for domestic, and 6 4-10 for foreign, to 6½ and 6½ cents respectively. In April further large purchases were made by dealers of all the lead on hand in the New York market, including bullion, and prices were advanced to 6½ cents and 6½ cents for domestic, and 6½ cents to 6½ cents for foreign, at which figures the market remained firm and active for nearly six weeks, many sales being made at the high figures on time adding interest. Toward the end of May, when the roads at the mines became passable, the bullion again came forward from the West, and the price of domestic lead declined gradually but steadily until August, when it reached 6 cents; foreign, however, remained a little firmer, and fell only to 6½ cents. Toward the end of April the Government offered at public auction about 500 short tons of re-melted lead from store at St. Louis, Philadelphia, and West Troy, of which some 2400 gross tons found its way to New York, being laid down here at about 6½ cents gold; the balance of the lot was absorbed by the Western manufacturers. About the end of August all the lead on hand in New York, amounting to some 2300 tons, counting both domestic and foreign, were bought up at 6 cents and 6½ cents respectively, and the price was again advanced to 6½ and 7 cents respectively.

Trade was moderately active during the spring, excessively dull all summer, and revived in September, just as the price of pig-lead reached its maximum; but toward the end of the month the terrible financial cyclone that took its rise in Wall Street, and spread over the entire country, paralysing almost every branch of business, by its effect on the lead market, checking consumption, and causing a steady decline in prices until the middle of November, when it reached 6 cents for domestic and 6½ to 6½ cents for foreign, at which figures we are brought to the close of a year that has been fraught with unusual vicissitudes and trials to all business men. We look forward, however, to a healthier tone for the coming year, and to unusual activity and prosperity in every department of trade.

AMERICAN IRON TRADE.—The extraordinary depression which has overtaken the iron trade of the United States through the panic, and its effect upon railway building, is thus summed up in the annual circular issued by Mr. Edward Samuel, of Philadelphia:—"The production of all kinds of pig metal in this country for 1873, as now definitely ascertained, amounted to 2,850,070 net tons, of which 1,329,812 tons were anthracite, 922,425 tons bituminous coal and coke, and 598,333 tons charcoal, 37,746 anthracite coal and coke, and 224 tons peat and charcoal. The total production exceeding that of 1871 by 917,462 tons. The estimated production for 1873 is 2,695,434 tons, showing a decrease of some 110,000 tons, the result of the panic. Fully one-third of the furnaces of the country are out of blast, so that if the present activity continues the accumulated stocks will be largely reduced, and prices being maintained will not doubt lead to a resumption of operations by many stacks now idle. In 64 rails and scrap from the importations for the year have been remarkably light, probably less than 60,000 tons, showing a falling off of nearly 110,000 tons as compared with 1872. There are reasons to believe that the large trade in old rails done for several years past has about come to an end."

The MINING SHARE MARKET has been without any material change this week, and very little general business transacted. To-day a report was current that the tin standards had been reduced 2½, and tin mines, with a few exceptions, were offered at lower rates. The mines mostly dealt in have been Old Treburgett, Tankerville, West Chiverton, Prince of Wales, Wheel Crebor, West Basset, South Frances, Roman Gravels, Wheel Grenville, Wheel Uny, Penstruthal, South Roman Gravels, South Carn Brea, Dolcoath, and a few others.

Dolcoath, 47½ to 50 ex div.; at the meeting on Monday the accounts showed a profit on the quarter, charging up costs to Dec. 23, of 2711½, and a dividend of 12s. 6d. per share—2685½—was declared. The tin sold—200 tons—realised 18,581½; tin credited, but unstamped—17 tons—802½; balance in hand after payment of dividend, 144½. The shaft is now down under the 314 fm. level, with a lode worth 50½ per fathom. In this shaft the lode has not been of any value for 80 fms. sinking; it may, therefore, have come into a new bunch of ore. Two shafts are valued at 75½ per fathom, and other points in operation are worth in the aggregate 755½ per fm. Cook's Kitchen, 11 to 12; Carn Brea, 55 to 60; East Basset, 9 to 11; Wheel Crebor shares have been firmer at 4½ to 4½. Wheel Grenville shares also firmer at 6 to 6½. West Basset, 9 to 9½.

Wheel Basset, 24 to 26; at the meeting, on Tuesday, the accounts for three months showed a loss of 677½, and a balance against the adventurers, taking credit for 70 tons of tin ore sold, of 2532½. No call was made. The agent stated they had 70 tons of tin in stock, which they hoped, after the sales of Banca and Australian tin, would fetch a better price. The report stated that Stevens's shaft, on great lode, is down 112 fms., and that seven ends were worth in the aggregate 39½ per fathom; six stopes, 66½. The mine during the last quarter has opened out beyond their expectations, and looking at the increasing quantity of tin ground being laid open they have every confidence that they will soon be able to clear off the debt. Bedford United, 17s. 6d. to 22s. 6d.; Bog, 12s. 6d. to 17s. 6d.; East Caradon, 20s. to 25s.; East Pool, 8½ to 9½; Gawton, 4 to 4½; Great Laxey, 13 to 13½; Great Wheel Voss have declined to 1½, 2½; Marke Valley, 15s. to 20s. At Carn Camborne a call of 2s. per share was made; the debit balance was 856½; liabilities, 519½; the returns are likely to increase, as there is a fine course of ore in the deepest part of the mine.

West Chiverton, 6½ to 6½; at the special meeting, referred to in last week's Journal, the adventurers agreed to accept the offer of the lords to renew the sets upon the terms proposed by Mr. Downing's letter on Dec. 12, but they hope a favourable consideration will be given to an application for a reduction of dues. Pennerley, 2 to 2½; Penstruthal, 10s. to 21s.; Prince of Wales, 4s. to 6s., and more business done. Providence Mines, 7 to 8; Roman Gravels, 17 to 17½; Rookhope, 17s. 6d. to 22s. 6d.; Old Treburgett shares have been in good demand at an advance, and leave off 20s. to 22s. 6d. Preference, 17s. 6d. to 20s.; an official circular has been sent to the shareholders informing them that the accounts to be presented to the general meeting next month will admit of the payment of a substantial dividend in the old and new shares, and that it is "considered by those well qualified to form an opinion" that the prices of shares are far below what the improved and improving prospects of the mine would warrant.

Rosewall Hill and Ransom, 15s. to 20s.; South Carn Brea, 3 to 3½; South Condurrow, 4½ to 5; South Frances, 13 to 14; South Roman Gravels, 19s. to 20s. Tankerville shares have been much firmer, and more in request, at 9 to 9½. Tincroft, 30 to 40; Van Consols, 3½ to 4; West Frances, 10 to 11; West Maria and Fortescue, 1-16th to

3-16th; West Tankerville, 2 to 2½; Wheel Kitty (St. Agnes), 9 to 9½; Wheel Margaret, 2½ to 2½; Wheel Seton, 17½ to 20.

Wheel Uny, 3 to 3½; West Esgrail Lte, 3 to 3½; North Roskear, 3 to 4; West Seton, 3½ to 3½. East Lovell shares have declined to 9, 10, and the accounts, to which we called attention a fortnight ago, are creating no little sensation in Cornwall, though the plan adopted with reference to them have been, we are sorry to say, in constant use in more than one large undertaking in the county. And, to put a stop to it, the simple question for some shareholders to have in some way decided is—If heavy debts are kept back from the knowledge of outside shareholders, and dividends are declared for the purpose of getting up or influencing the price of shares; and a person deceived by the published accounts, and upon the strength of the dividends, buys shares in ignorance of the debts, and afterwards is called upon to pay heavy liabilities incurred long before he became a shareholder, what remedy has he? Gwydyr Park, ½ to ½, nominal; at the special general meeting, particulars of which will be found in another column, it was resolved to issue 12,000 shares of 6s. each, with a preferential dividend of 20 per cent. The mine is looking well, and it is the general opinion that it only requires a little more capital to bring it into a profitable state. But the company being limited, and fully paid-up, have no means of getting this capital without raising it in this way. At the conclusion of the ordinary general meeting of the Belstone Mining Company, to be held on Friday next, there will be a special meeting to consider the desirability of increasing the capital.

Almada and Tiritio, 16s. to 18s.; Chontales, 16s. to 18s.; Eberhardt and Aurora, 4 to 4½; Emma, 3½ to 3½; Flagstaff, 3½ to 3½; Frontino and Bolivia, 4 to 4½; Malpaso, 1 to 1½; New Quebrada, 4 to 4½; Tecoma, 1½ to 1½; South Aurora, 15s. to 17s.; Sweetland Creek, 5 to 5½; Utah, 1½ to 1½.

The Market for Mine Shares on the Stock Exchange during the week has been almost featureless, although in home descriptions a comparatively steady tone has been maintained. American mines have remained without any material alteration, but shares in Gold-Washing Companies continue in demand.

The Metal Market has been fairly active. Copper remains tolerably steady. Tin easier, although official prices are unaltered, business being reported at wide figures. Lead nominal, and no change is looked for until the speculative stock has been absorbed.

Emma shares have been less active, and close 3½ to 3½; the latest advices state that on Jan. 2 another parcel of 25 tons of ore was sampled at the Salt Lake City Smelting Works, and proved to be one of the richest parcels every taken from the mine; its average sample value was 1000 ozs. of silver per ton, and a percentage of lead; the ore was taken from the lower levels, and it is understood to be a specimen of an immense body of the same class recently developed, but of the extent no information is yet to hand. The mine has not shipped much ore of late, but they are now expected to be resumed. Flagstaff, 3½ to 3½; the latest advices state that there were 40 men at work; report of the directors and balance-sheet will be issued to-morrow (Saturday). Last Chance, 1½ to 1½; the general meeting will be held *pro forma* on Jan. 31, to be adjourned to Feb. 21, before which time the directors will be able to place in the hands of the shareholders the report and accounts. Tecoma, 1½ to 1½; the report and balance-sheet will be issued to-morrow (Saturday); the last accounts state that the men, after waiting two or three months, have been paid. Utah, 1½ to 1½; Mr. Longmaid telegraphs that he intends starting the dressing machinery next week for a trial—weather permitting.

Richmond Consolidated, 6 to 6½, ex div.; the absence of the usual weekly telegram is at present unexplained. Such a thing has only happened once or twice before, and then by accident. The probability is that the cause is to be found not at the mine but on the road. A meeting of the shareholders is called for Tuesday, for the purpose of meeting Mr. Probert and Mr. Corrigan. As both these gentlemen left here in November, 1872, and have up the period of their recent return passed a great deal of time at the mine, and been in a position to make a complete study of its character and prospects, they will be able to give most valuable evidence on these points to their fellow-shareholders. New Pacific, 10s. to 12s. 6d.; call paid. Mr. Pringle writes that he is actively engaged in preparations for the underground operations, which will be commenced as soon as everything is in readiness.

South Aurora, 3 to 3½; a meeting has been convened for Monday, to confer with the shareholders concerning a provisional agreement which the directors have entered into for developing a vast mineral property in Canada, consisting of gold alluvial washings and gold quartz reefs, involving an outlay of about 3000. In providing machinery and making such trials as will fairly develop the resources of the estate, with the right to invest a further sum of 7000. In the preference shares of the proposed English company. The bonus to be given to the South Aurora Consolidated Company is 2500. of ordinary shares for every 1000. of preference shares subscribed; practically, therefore, if the project be approved on Monday, the South Aurora Consolidated Company would hold more than one-fourth of the entire property. The property, situated about 52 miles from Quebec, consists of about 18,000 freehold acres of land, and comprises an extensive plant requisite for carrying on alluvial and quartz mining operations. The mining rights are held free from royalty, under lease for an unexpired term of 23 years, and renewable for a further term of 30 years on payment of 2750. and 2 per cent. of the profits made during the extended period. Upwards of 30 quartz veins have been examined, and, estimating the yield by the mill process at \$15 per ton, leaves \$11 per ton profit; with machinery to crush 200 tons per day leaves a net annual profit of \$607,750. The alluvial deposits are similar to those in California; ten acres on the Gilbert River have yielded \$700,000 of gold, which is found at 2 to 2½ ft. from surface; one nugget weighing 71 ozs., another 51½ ozs., and many others from 4 to 30 ozs. each were found. Where the deep lead has been examined, and its level and position known, it may be worked with as much certainty as a bed of coal, the gold-bearing cement being usually about 5 ft. thick in the channel of the rivers; and it is important to note that during the three years the explorations were being made the work was carried on without any suspension during the winter months. According to attested computations, the alluvial ground now explored can be worked in (say) ten years, leaving a profit of \$1,000,000 a year.

The shares of the different Hydraulic or Gold Washing Companies have been in good request during the week. Sweetland Creek shares are firm, at quotations. Cedar Creek and Blue Tent in request. Birdseye Creek shares close at about last week's prices, and there has been a good many transactions in them. It is announced that the water season has at last steadily set in. Blue Tent, 5½ to 5½; in another column will be found a satisfactory letter from the superintendent; everything appears to be progressing satisfactorily. He has already announced that washing has commenced. Cedar Creek, 2 to 2½; Mr. Ludlum cables that the water season has fairly commenced, and that he is washing on seven claims with encouraging prospects. Birdseye Creek, 2½ to 3; the superintendent writes that he is ready to start on three claims. Having already done some few days washing there is no doubt but that now he is fairly at work. Sweetland Creek, 4½ to 5; Mr. McLean is washing in "full blast" through the new tunnel. Holcombe Valley, 3 to 1; the superintendent is pushing on with the erection of the five-stamp mill, and has laid open a great quantity of good quality quartz.

Sierra Buttes, 2½ to 2½; the receipts during December from Sierra Buttes amounted to \$29,926, against a cost for mining and milling of \$15,612; the Plumas Eureka receipts were \$18,000, the cost of mining and milling not yet received. Port Phillip, 4 to 4½; during November 4976 tons of quartz were crushed, and 26 tons pyrites treated, and the gold obtained 1118 ozs., or an average of 4 dwts. 11 grs. per ton; the profit was 637½; the report to be submitted at the meeting on Thursday (which appears in another column) states that as compared with 1872 the yield of gold during 1873 had been 18 grs. per ton less, the average return of quartz crushed having been 3 dwts. 23½ grs., as against 4 dwts. 17½ grs. per ton; the produce of gold, including that from pyrites, was 12,666 ozs., being a decrease as compared with 1872 of 3040 ozs. Scottish Australian,

OLD TREBURGETT.—The following circular has been addressed to the shareholders by the secretary of the company:—"As many shares in this company are changing hands, I think it right to inform the shareholders that the accounts to be presented to the general meeting, next month, will admit of the payment of a substantial dividend on the old and new shares; this, of course, is subject to the audit and resolution of the shareholders. I may add, for the satisfaction of

CARPAGH.—An influential company is in course of formation for working these well-known mines, on a more extended scale than heretofore attempted. Upwards of 30,000*l.* has been expended upon the property, which is now a first-class working order, and supplied with every requisite in the shape of plant, buildings, and machinery; the additional capital will, therefore, be exclusively ap-

TO IRON MERCHANTS, COMPANIES, AND ALL CONCERNED.
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Notices to Correspondents.

* Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be filed on receipt: it then forms an accumulating useful work of reference.

SARAWAK.—In reply to your correspondent, "Stibium," in the Journal of Jan. 19, I beg to inform him that the office of the Borneo Company, of Sarawak, is in Fenchurch-street, London. The Borneo Company have the monopoly of working all the minerals (except gold) that are, or may be, discovered in Sarawak, consequently they are the only mining and smelting company in the settlement. Gold washing operations are carried on extensively in some parts of the settlement by the Chinese, but the quantity of gold they find is not large—in fact, it is not much more than sufficient to supply them with the necessities of life. The Borneo Company or the Sarawak Government are the only parties you could apply to for such an appointment as you are seeking.—HYDRARGYRUM.

CRANFORD.—As one interested in this mine, I have in vain searched your columns for some account of what is doing there, but without finding any notice of it. Can any of your numerous readers enlighten the mining public in the matter? Many others as well as myself are waiting for the fulfilment of the very sanguine—shall I say, too sanguine—anticipation of the "substantial dividend" promised the shareholders towards the close of the last year by the managing director.—ONE OF THE DISAPPOINTED.

SLATE TRADE.—"J. E. T." (Hay).—You will obtain the information you desire from "Slate and Slate Quarries Geologically and Commercially Considered," by Mr. S. R. Pattison, F.G.S., and "The Slate Trade of North Wales," by Mr. J. Kellow. Each pamphlet is published at 1s., and we will forward both by post on receipt of 2s. 6d.

MINERAL WEALTH OF THE ISLE OF MAN.—"D." (Ramsay).—The returns made to the Inspectors of Mines are, doubtless, more reliable than those made to the Office of Woods, which would, probably, relate to those only upon which dues had been actually paid; the correct figures, or at least the nearest estimate, for zinc ores for 1872 would, therefore, be—Ballacorkish, 118½ tons, worth 388. 13s.; Falcon Cliff, 9 tons, 27l.; Foxdale, 45 tons, 135l.; and Great Laxey, 3872 tons, 66,413. 7s.=6044½ tons, worth 16,961l. By taking the Office of Woods' incomplete returns (made for a totally different purpose) the reputation of the zinc mines of the island is damaged to the extent of one-fourth of their produce.

SURVEYING AND DIALLING.—"G. S." (Wakefield).—We know of no work so well calculated to give you the knowledge you require as Hopton's Conversations on Mines, which we will forward you on receipt of 2s. 6d. The book is written expressly for practical men, and there are no words used which they cannot understand. The explanation of the mode of dialling occupies about 18 pages. There is also much useful information with regard to ventilation and various other matters relating to colliery working.

TRAM FOR TRAM CARS.—Referring to the enquiry of "J. L." (Hammersmith) in the Mining Journal of Jan. 10, as to whether any power other than that of horses had been used for the propulsion of tram-cars, Mr. S. S. Williamson, of Saundersfoot, writes that patents have been secured for engines and boiler suitable for either tram-cars or traction-engines, and the boiler for consuming anthracite coal, so that there would be no noise or nuisance in the public streets. As soon as the inventions have been practically tested the result will be made known.

TALIESIN MINING COMPANY.—"A Shareholder."—Should have taken the very necessary precaution of ascertaining whether the prospectus guaranteed that no allotment should be made unless a given amount of capital were subscribed. The 12 tons of lead stated in the letter of July 23, 1872, to have been sold at a fair price does not appear in the official statistics for 1872, although the name of the mine is inserted; perhaps it was sold during some previous working. We have received no notice of any public meeting of the company, or it would have been reported in the Journal. "A Shareholder" might enquire of the secretary how much capital was actually subscribed, though all seems to have been expended before July 23, 1872, but it will not relieve him from his liability to pay the calls due upon the shares he has himself taken. It frequently happens that where a company is formed with a capital of 30,000l., half for the vendor and half for working, that the allotment is made so as to give the vendor control of his fully-paid shares, and to relieve the directors of the responsibilities they may have undertaken when but very few shares are subscribed, and there is nothing absolutely illegal in the course, although the bona fide shareholders are sacrificed by it. The only effectual remedy would be for capitalists to refuse to subscribe to any company unless the prospectus distinctly states that no allotment shall be made unless at least three-fourths of the capital (exclusive of vendors' shares) shall have been subscribed before a given date.

Receipts.—"Economist."—"W. B. P."—"A Subscriber" (Runcorn).—"W. S."—"G. H. P."—"A Shareholder" (Leeds).

* With this week's Journal is published the TITLE-PAGE and INDEX to VOLUME XLIII. for the year 1873.

The space occupied by the Title-Page and Index has necessitated the postponement of several articles and letters intended for this week's Journal. Correspondents will kindly accept this intimation as explanatory of the non-appearance of their communications.

AMERICAN SUBSCRIBERS.—In reply to several enquiries, it may be stated that subscribers in the United States can be supplied with the Mining Journal, post free, at the price of \$5 gold per annum, payable in advance, by remitting to Mr. D. Van Nostrand, publisher, and importer of scientific books, &c., Murray-street, New York; or, direct to our Office, 26, Fleet-street, E.C.

THE MINING JOURNAL,

Railway and Commercial Gazette.

LONDON, JANUARY 24, 1874.

THE TRADES UNION CONGRESS.

After a sitting lasting six days the Annual Congress of Trades, held this year at Sheffield, was brought to a close on Saturday last. More than 100 persons took part in the proceedings, amongst them being delegates representing upwards of 240,000 miners, and at the least 100,000 unionists connected with the various branches of the iron and steel trades. In the category of trades represented we also find railway servants and agricultural labourers, so that we will eventually have to extend the meaning of the word "trade" from its generally received sense up to the present time. The programme of business was certainly a most extensive one, but the actual work done of a really practical character, and the proceedings altogether, were not such as the great body of the working classes of the country need be particularly proud of. Of course, the press came in for its usual condemnation for seeing things in a different light to working men. This, indeed, was the actual commencement of the work of the Congress, for the first report read was that of the Parliamentary Committee, which stated, *inter alia*, that "they had continually to contend with misrepresentations in the press and on the platform." As we may be included amongst the offenders in connection with the former, we can readily believe that what most people would term fair criticism is put down by Trades Unionists as misrepresentation—a word very frequently used by those who have been worsted in argument. Reports of various other committees followed, including those relating to the Masters and Servants Act, the Summary Jurisdiction of Magistrates, the Law of Conspiracy, the Truck System, the Factory Nine-Hours Bill, Reduction of the Qualification of Jurymen, the Better Preservation of our Seamen's Lives, &c., &c. In fact, everything inside and outside of trade legislation was arranged for discussion. Mr. ROLLEY, of Sheffield, having been elected president, that gentleman on Tuesday gave the inaugural address, and in doing so touched upon a great variety of topics, one of them being the Contagious Diseases Act. He was most emphatic in manner, as he was original in his matter, and declared that "Trades Unionism was the blessedness of principles," and urged the necessity for sending to Parliament the "noble-minded" men they had in their ranks, so that the working men would be no longer "beneath the foot of the oppressor." The latter, we presume, are the employers of the workmen, and whose duty it is to find wages, if nothing else. He concluded his harangue by stating that as the working men had power, and knew it, the world should know they intended to use it. The report of the Parliamentary Committee was then taken up. This led to a great deal of noise and squabbling, many delegates speaking at the same time, and giving one a by no means pleasant idea of what a Parliament of working men would be, although the President in his address said "their parliamentary assemblage has become as great a consideration, in some respects at least, as the House of Commons, or the House of Lords." Several amendments, riders, and alterations were proposed, and with great difficulty order was restored, but not before Mr. CREMER, of international notoriety, had remarked that if the "same thing" had occurred in their local meetings they would be ashamed of themselves, "but there were a great many persons who were fond of hearing themselves talk."

Amongst the papers then read was one by Mr. CROMPTON, a young barrister, much devoted to Trades Unionism, probably from a lack of more profitable employment, upon the memorial presented by the National Federation of Associated Employers of Labour. The paper, of course, was from the workmen's stand-point, and the Criminal Law

Amendment Act, with the Law of Conspiracy and other Acts, were freely handled. With regard to "picketing," Mr. CROMPTON remarked that a law which said that "any person standing in the street shall be punished is obviously unjust." No doubt it is so, unless he is there for an unlawful purpose, which makes all the difference in the world. As the question of picketing is undoubtedly very important, we find, on looking into the matter, that a greater authority than Mr. CROMPTON has paid considerable attention to the subject. Sir W. ERLE, in connection with the report of the Royal Commission on Trades Unions, in 1869, says that "any act that obstructs the exercise of any right, if done for the purpose of obstructing, would, if damage was done thereby to the party obstructed, be a violation of the law." "It is equally a wrong," he says, "whether it be done by one or many, subject to this observation, that a combination of many to do a wrong in a matter where the public has an interest is a substantive offence of conspiracy. It is equally a wrong whether the obstruction be by means of an act unlawful in itself on the part of the party obstructing, or by means of an act not otherwise unlawful." As a matter of right there must be entire freedom in the disposal of either labour or capital, and any obstruction to either cannot be tolerated, notwithstanding the very mild form in which picketing is put forward by Mr. CROMPTON. We suppose that the law is well known by that gentleman, and that its fairness is admitted by all unprejudiced persons.

But leaving the subject of intimidation, as practised by picketing, we are at a loss to find why there should be such a great objection, such a dead set made against the federation of employers and capitalists by a vast association of labour boasting of its power to overturn almost everything, to return its own members to Parliament, and to sweep away all laws from the Statute Book they consider inimical to their interests, as well as those that are not. Their power, as the President said, is great, and they mean to show the world they can use it in their own interests. With such a boast, surely it is not at all surprising that the employers of labour, and who have to find the wages by which such great things are to be accomplished, should also form an association to look after their own interests, when they find that those who are really dependent upon them desire to become their masters. The Trades Unions have wielded a very great power, with anything but discretion, and, consequently, to their own loss as well as to the loss of their employers. The leaders of the Unions have set at defiance all the recognised principles of political economy, and which they have been compelled to admit. This has been pointed out in the report of the Trades Union Commission, in which, in answer to questions, it was admitted that the "general policy is to take advantage of a brisk trade to insist on a rise of wages, and when trade is slack to resist a fall." And, further, we have it reported that "in many cases leaders of Unions fail to consider whether the circumstances of trade are such as to call for or admit of a rise in wages. It is with them rather a question of the relative strength of the two parties." Those are matters, however, which such men as Mr. CROMPTON, whose views are in every way *ex parte*, are not likely to look at. But it is in consequence of such a state of things existing, and being carried out, that a federal union of a large number of the employers of labour has taken place, for the sole purpose of preventing any unfair advantage being taken by their workman, or the leaders to whom they transfer their own rights and power. For our own part, we consider that the federation of the employers of labour banded together for the purpose of maintaining their own rights, and with no desire to become aggressive, will be of advantage, not only to themselves, but also to the intelligent workmen who wish to act for himself, and have that liberty which belongs to every working man who is not the slave of an Association. But we see no reason why working men should assume to themselves a monopoly of combination; at the same time, we do not see that they have anything to fear from their employers following in their footsteps; the only surprise being that they did not do so many years ago. For our own part, having paid a good deal of attention to the matter, we think that the federation of capitalists is eminently calculated to put an end to strikes and serious disputes, for we believe in the maxim that "to maintain peace it is desirable to be prepared for war."

The trades' associations and the employers' league, like two opposing forces aware of each other's strength, will not be desirous of commencing hostilities, and will be willing to accept the offices of a mediator when such shall be deemed necessary. The two bodies will also be able to come to terms on many minor points, so as to avoid all interruption to trade. Greater freedom, as we have before stated, will be given to the skilled workman, for in many trades we know that it is the rule to pay the expert and the unskilled labourer the same wages, a system which Mr. STUART MILL says "is not only pernicious, but a public mischief."

Another important question discussed at the Congress was the forcing of a levy on all unionists, for the purpose of sending working men representatives to Parliament. The matter was of course, warmly supported by those men who have already been invited to stand for different places. On the other hand, as might have been expected, it was opposed by those who were not so fortunate as to be importuned to become candidates for places where the electors were burning with impatience to return working men as their representatives. The resolution in favour of the levy was lost, each district or association being left to act for itself in the matter.

The last day saw a great deal of business cleared off, and but little speaking was done. But it was reserved for Saturday to see a most monstrous proposition made and agreed to. It was that all taxes should be levied on realised property—or that the frugal and provident should be taxed for the benefit of the well-paid and spendthrift working man. Or, to put it in another way, that the man who had saved just enough to subsist upon in the evening of his days, and the widow with her family of three or four little ones, with her 1l. or 2l. a week with which to support them, should be taxed, whilst working men—many of them earning 5l. or 6l. a week for less than 50 hours' labour should be let off scot-free. That such a resolution should be carried unanimously speaks but little for the morality or the sense of justice which belongs to those who presume to the title of being the most intelligent, as well as the leaders, of the working man. Any comment of ours would be superfluous, and so we leave the closing act of the Congress to speak for itself, as showing what we might expect were the power of legislation placed entirely in the hands of the representatives of the trade associations of the kingdom.

THE "KAINOTOMON" ROCK DRILL.

Since our last notice of this drill, when it was exhibited and worked before the meeting of the Royal Cornwall Polytechnic Society, in August last, and where it was unanimously awarded by the judges the 1st medal, we learn that the subsequent sales have corresponded to the high opinion we then formed of it. "Kainotomon" drills have been sold in England, Scotland, Wales, Ireland, Germany, Sweden, Saxony, Austria, France, Belgium, Switzerland, and Spain, and they have universally given great satisfaction. We have been shown a number of letters from purchasers; among others, Mr. Torrance, of the Midcalder Lime Works, near Edinburgh, speaking of the "Kainotomon" drill, writes on July 31, 1873:—"I may say the boring machine works splendidly." And again, Sept. 9, "It is working every day." Mr. Torrance's opinion is of value, as he has tried several rock drills. The Lanemark Coal Company, who used the drill for sinking a shaft, write on Oct. 9, 1873:—"The 'Kainotomon' will be a success, and our man, after boring two or three holes, could work it easily." And again, on Dec. 13: "We are quite satisfied that there is a very considerable saving in money and time by using it in hard rock, as compared with hand-labour. In wear and tear of jumpers and smiths' work the saving was very great."

This drill has also been successfully tried where hand-labour was useless. At the Biggill limestone quarries, where, from the jointy nature of the rock, it was found impossible to profitably work by hand labour, the "Kainotomon" drill bored large holes of 2½ inches diameter, at the rate of 18 inches in 5 minutes, in very hard rock, and notwithstanding all the irregularities in boring through joints and fissures, a depth of 70 inches was attained in 70 minutes, including all stoppages for changing drills, &c.

The following is the result of experiments at Crewe, made in the presence of engineers of the London and North-Western Railway,

with the "Kainotomon" drill, Aug. 7, 1873, in hard mountain limestone, diameter of steel drill 1½ inch:—

| Steam pressure. | Depth bored. | Time. | Rate. | Weight of machine |
|-----------------|--------------|------------|----------------|-------------------|
| 50 lbs. | 15 inches | 2¼ minutes | 5.5 per minute | with stand |
| 50 " | 15 " | 2¼ " | 5.5 " | 2¼ cwt. |
| 50 " | 15 " | 2¼ " | 5.5 " | |
| 50 " | 15 " | 2¼ " | 5.5 " | |

At the Royal Mines of Prussia two of these drills have been at work for the last six months, without any repair, in shaft sinking. The managers of the mines were so satisfied that they have now given orders for four more "Kainotomon" rock drills, and an air-compressing machine to drive them. We also understand that this rock drill has been tried at the St. Gothard Tunnel, in Switzerland, where it has met with the approval of the engineers, and is likely to be largely adopted.

We have before called attention to the extreme simplicity and handiness of the "Kainotomon" drills. These qualities appear to be fully appreciated by those who have purchased machines, and we have no doubt that as these drills become better known the employment of them will be largely extended.

THE MINERAL WEALTH OF IRELAND.

Although the development of the mines of Ireland has always been seriously impeded, owing to the very inadequate amount of capital which has been brought to bear upon them, the recently published statistics for 1872 show that considerable progress is being made, and that there are inducements for capitalists quite as great as those which have sufficed to attract vast sums in other directions where experience has proved that British capitalists cannot obtain profits. During 1872 the value of the minerals raised in Ireland was nearly 300,000l.—an enormous amount considering the working capital which has been in use, although it may appear small when compared with the figures representing the mineral produce of the entire kingdom; and when the number of mines in operation is made an element in the calculation no doubt can remain that if the same amount were sent into Ireland as has been fruitlessly expended by English companies in the mines of America, Ireland would well repay the outlay. Let us see what the several descriptions of Irish mines have done, and whether the result does not justify the most favourable anticipations with regard to the future.

There were only eleven copper mines at work, yet they produced 8019 tons of ore, containing 686 tons 5½ cwt. of fine copper, of the value of 58,428. 18s. But two lead mines were in operation, yet they returned 962 tons of lead ore, containing 726½ tons of lead and 1040 ozs. of silver, worth together about 13,500l. The single zinc mine at work yielded 634 tons of ore, worth 1933l., whilst four iron pyrites or sulphur mines gave 42,950½ tons of ore, of the value of 23,265. 2s. 6d. Of iron mines there were but 19 in operation, yet from these were produced 176,550½ tons of ore, worth 158,562. 10s.; and the 29 collieries in operation during the year yielded 103,463 tons of coal, which at the low estimate of 7s. 6d. per ton would be worth 38,799l., raising the total to 294,549l. from 66 mines, all of which are worked with little more capital than that obtainable from the ores produced. May it not be hoped that the consideration of these figures will cause Irish mining to receive greater attention?

DEVELOPMENT OF THE INDUSTRIAL RESOURCES OF IRELAND—THE IRISH CORPORATION.

A company is in contemplation, with a capital of about 4,000,000l., of which about 250,000l. will be first issued, for facilitating the development of the industrial and commercial resources of Ireland, and as the enormous extent of these has long been recognised, there can be no reason to doubt that a judiciously constituted company, conducted by men intimately acquainted with Ireland and Irish affairs, and possessing adequate capital and the confidence of Irishmen, could do a vast amount of good. The promoters of the present undertaking are Messrs. Mason, Sons, and Knight, engineers, mining agents, and surveyors, of New Bridge-street, Blackfriars, and it is explained that the sources whence the corporation look to derive its income are from loans made for the development and working of the minerals of the country, from loans made for the formation of railways and other means of intercommunication, loans for the formation of docks, harbours, &c., and also from loans made to various local corporations on security of their rates, tolls, dues, &c.

The successful working of the Irish affairs is at present simply impossible, from the lack of capital which can be brought to bear upon them, and they hold that an association of the character described will supply this pressing want, and will in itself prove most remunerative to its members, and an incalculable blessing to the country. The success of such an enterprise will, of course, depend upon names and ability of gentlemen connecting themselves with it, but we understand that a prospectus will shortly be issued, and we shall then be better able to pronounce an opinion upon the practicability of the undertaking.

AMERICAN MINING MARKET.

We understand that a number of valuable mining properties are about to be offered to our investing public. Syndicates are busily organising, and it is expected that a lively business will be transacted during the next six months. The Mining Journal, far from discouraging the introduction of mining schemes upon the London market, which has of late experienced so frequent disappointments in consequence of the failure of leading mining companies in paying long-promised dividends, is well determined not to recommend any property which has not been examined and thoroughly investigated by competent and reliable men, having the full confidence of English investors.

The forthcoming mining campaign is probably to be inaugurated by the early introduction on the London and other financial markets of the Great Ortiz mine grant of New Mexico. The magnitude of that enterprise, to which it was previously alluded in these columns, is such that upon the success or failure of its introduction will depend the issue of the opening campaign. There is nothing so far which can create any doubt of its success, as it is to be brought out strictly upon the terms of protection advocated by the Times and the Mining Journal, in conjunction with the recommendations suggested by the Mining Bureau, whose president, Col. Berton, was instructed by English capitalists to examine the Ortiz property, and to have it reported upon by a competent engineer, duly appointed and acting under his personal direction. From what we know of the result of the examination and of the terms agreed upon for the successful negotiation of that extraordinary property, which consists of an area of about 80,000 acres of rich mineral land, it results that, owing to its magnitude and that of the capital stock, which is to be 1,000,000l., all questions of management will be entirely left to English investors and shareholders, the vendors of the property to receive shares only in payment thereof in order to ensure full protection to the invested capital.

As soon as the prospectus and other documents concerning the Ortiz mine grant have been submitted to us we shall express our views upon the merits of the enterprise, relying entirely in the meantime upon the measures of protection, as suggested by the Mining Bureau, the London branch of which is at the office of Mr. J. Elkin, Great Winchester-street-buildings, where all communications to Col. Berton can be directed.

A WELL-DESERVED TESTIMONIAL.—A number of influential London merchants and bankers, after due consideration, have unanimously adopted the following:—

Whereas, We are desirous of expressing to Colonel J. BERTON, Vice Consul of France at Sacramento, California, our satisfaction as to his indefatigable and successful exertions in having, as the founder and President of the "Mining Bureau of the Pacific Coast," firmly protected English as well as European shareholders and capitalists against a number of mining enterprises which have proved to be, since his disinterested admonitions, schemes of the most fraudulent and disastrous character.

Resolved, That we respectfully tender our best thanks to Colonel Berton for his services as the worthy representative and protector of the English as well as French interests on the Pacific Coast.

Resolved, That the above resolution be engrossed and presented to Colonel

Berton, and that a copy thereof be forwarded to the newspapers, and also to the Minister for Foreign Affairs at Paris.

EXPORTS OF TIN-PLATES.—The exports of tin-plates from the United Kingdom in December were about an average, having amounted to 7494 tons, as compared with 6981 tons in December, 1872, and 9366 tons in December, 1871. In these totals the United States figured for 4665 tons, 4874 tons, and 6189 tons respectively. The aggregate exports of tin-plates last year amounted to 120,468 tons, against 118,083 tons in 1872, and 119,606 tons in 1871. In these totals the United States figured for 85,531 tons, 87,360 tons, and 86,920 tons respectively. The value of the tin-plates exported in December was 228,549*l.*, against 227,204*l.* in December, 1872, and 237,796*l.* in December, 1871; and for the whole of 1873, 3,952,841*l.*, against 3,806,973*l.* in 1872, and 2,900,625*l.* in 1871.

REPORT FROM CORNWALL.

Jan. 22.—The one event of the week is the very satisfactory report which was presented at Dolcoath account as to the condition of that famous mine. The deeper it goes really the richer it appears to get. The sump-shaft, which has not been worth anything for the last 80 fms. sinking, is now worth 50*l.* a fathom, and the various points in operation make up a total of 755*l.* Take this in connection with the rich run of tin-stuff in the bottom level, which is crushed and sent off to the smelters without dressing, and there really appears to be no limit to the wealth of this wonderful concern. Mr. West's joke that he thought the Australian tin must have slipped out of the bottom of Dolcoath was a decidedly happy one. No mine could afford more encouragement to vigorous prosecution in depth, and it may be the part of Dolcoath to solve the problem as to the nature of the substance or substances whose specific gravity is so much higher than that of the ordinary crust of the earth, and which should be reachable somehow, to which Mr. Hunt alluded some months ago at a South Caradon account.

So Capt. Boyens has again resolved to stock. It has paid him before, and he is so shrewd an observer of the signs of the times that we should not wonder if other managers were to follow his example. The difficulty which lies in the way of the adoption of such a course in most of our mines is the want of sufficient floating capital. Many thousands of pounds have gone into the pockets of the smelters because they have been able to afford to buy, whilst the mines, living from hand to mouth, were compelled to sell. Almost as much as great improvements in dressing apparatus, and greater economy in working generally, we need a financial reform—something that will adapt our too much antiquated system of accounts to the need of the present times. Why should it be that the system of book-keeping should be the only thing that time has spared in connection with our mines' management? Practically it comes to that, and, indeed, where changes have been introduced they have for the most part exhibited very little improvement. There are two great blunders committed. One is sticking obstinately to the old ways, and the other in recklessly insisting on introducing new ones, heedless of the important considerations of the peculiarities alike of the conditions of the industry and of the locality. The man does not yet seem to have arisen who has struck the right middle course.

West Chiverton adventurers have agreed to the terms of the lord, and will pay 675*l.* as a premium on the renewal of the lease. Many people will be apt to think that the justice of the demand is proven by the fact of its having been met. But, on the contrary, it proves nothing of the sort. It only proves, as one of the adventurers present at the meeting when the question was decided said, that they were in the lion's mouth, and could only hope to get out of it by paying. It was simply a choice of evils, so far as the mine was concerned, quite a question of "Your money or your life." The shareholders have preferred to keep the mine alive if they can, and, no doubt, they have decided wisely. But what prospect have they of the reduction of dues which they seek? They may get it, but the exaction of the renewal premium is not an encouraging fact.

Mellanear is to be re-constituted and worked vigorously, it is said. It would have been a pity if a mine with such prospects had been allowed to drop; but let us hope that the present body of shareholders will have sufficient faith to go on, and that the Great Wheel Basy *fiasco* will not be repeated.

It seems at length as if some check will be put to the system of migration to other mining districts to fill the places of men on strike, which has been so long customary in the county. At a meeting held at Redruth it was decided that Cornishmen should keep away from Burnley. Of course, this only applies to those who took part in the meeting; but there is also a talk of a Union being formed. It is not very easy to see what the men can expect to gain by this, the difference in the conditions of Cornish and coal mining are so many and so great.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

Jan. 22.—The Iron Trade of South Staffordshire remains in a quiet state as to demand, but there is no indication of any early reduction in quotations. Pig-iron is in steady request at the standard of 7*l.* to 7*l.* 10*s.* for all-mine, 5*l.* 15*s.* to 6*l.* for part-mine, and 4*l.* 10*s.* to 5*l.* for cinder, hot-blast, with the usual extras for cold-blast and charcoal makes. The manufacturers of finished iron have a scanty supply of orders, and the majority of the mills and forges are only in partial operation. Marked bars of B.B.II., and other first-class brands, continue to be quoted at 14*l.* per ton, but second-class bars of fair merchantable quality are freely offered as low as 11*l.* 15*s.* per ton. Ordinary sheets (singles) are selling at 13*l.* 10*s.* to 14*l.*; and the rates are proportionate for rods, strips, hoops, plates, and angles of corresponding quality. The advance of 10*s.* per ton noted last week in the price of galvanised iron roofing sheets is steadily sustained, and there is still a tendency to firmer quotations, as the result of an association of the manufacturers now in course of formation.

Coal in South Staffordshire steadily maintains its price, but the demand continues quiet, and numbers of the collieries are only in partial operation. West of Dudley the prices are:—Best thick-coal 23*s.*; common, 18*s.* 6*d.*; lumps, 17*s.* 6*d.*; and slack, 9*s.* per ton, and the rates are proportionate for other qualities. On the Wolverhampton side of the district the coalmasters are seeking orders, and some of the smaller firms are making slight concessions, but not in sufficient numbers to influence the general market. In the neighbourhood of Essington some of the small firms have this week reduced the price of their best house coal from 20*s.* to 18*s.* 4*d.* per ton at the pit's mouth. Native ironstones are in steady demand, and prices are firm at 25*s.* to 26*s.* per ton for white and gubbin in their raw state, with the usual extra for calcined samples.

The Conduit Colliery Company, at Hednesford, in the Cannock Chase district, of which Mr. Allcroft is the manager, are putting down on a large and enterprising scale new ventilating apparatus. A new engine-house and a shed for the fans to work in are now in course of erection from designs supplied by Mr. J. R. Veall, architect, of Wolverhampton.

A new joint-stock company will be launched for the purchase and development of an important mineral estate in the centre of the Cannock Chase district.

The annual meeting of the Dudley Institute of Mining Engineers was held on Monday [a full report of which appears in the Supplement to this week's Journal]. Mr. John Field, of West Bromwich, was elected president for the ensuing year, vice Mr. W. Blakemore, of Heathtown, whose term of office had expired. The Council of the Institute had agreed to offer a prize of 20*l.* for the best model of a hand coal-cutting machine. A valuable paper was also read by Mr. T. Parton, F.G.S., on the economic extraction and combustion of fuel, based upon the report of the Royal Commission.

In the North Staffordshire district the Iron Trade, on the whole, steadier than last reported, but the activity at the mills and forges is not of very marked extent, and some of the furnaces are laid off. Crown bars are firm at 12*l.* per ton. The price of pig-iron and ironstone is well sustained at last quotations. Coal is in plentiful supply, but there is no change in the standard of prices.

The annual meeting of the South Staffordshire and East Worcestershire Chartermasters' Friendly Association was held at Tipton, on Tuesday, and

a satisfactory financial report was presented. The association numbers 100 members, and its objects are to afford necessary legal assistance and protection to the employer against improper aggressions and pretensions, unjust claims and demands, illegal combinations, and other improper proceedings, and conduct of or by the employed, and at the same time to discourage and oppose any oppression of bringing about a better understanding between the employer and employed, and also to further such measures as may from time to time be considered advisable for the interests of the trade.

The directors of the Metropolitan Railway Carriage and Wagon Company have declared an interim dividend at the rate of 10 per cent. per annum, free of income tax, for the half-year ending Dec. 31 last.

The directors of the Patent Shaft and Axletree Company are about to pay their usual interim dividend, at the rate of 15 per cent. per annum, on March 1 next.

At Wolverhampton Police Court Mr. T. Brett, manager of the Albert Colliery, Darlaston, pleaded guilty, and was fined 5*l.* and costs, for neglecting to provide proper ventilation, in consequence of which an explosion occurred whereby two lives were lost.—Mr. William Spruce, manager of Old Park Colliery, near Dudley, was charged with permitting the use of iron tampering rods, but the stipendiary deferred his decision, owing to lapse of time since the offence. The lenient manner in which Mr. Baker is endeavouring to enforce the Act in his district is giving great satisfaction, and will tend much to cause it to be respected.

ALLEGED LIBEL BY AN INSPECTOR OF MINES.—At the Wolverhampton Petty Sessions, on Wednesday, before Mr. J. Spooner, Stipendiary, Mr. H. Underhill, the Town Clerk, applied on behalf of Mr. Henry Johnson, mining engineer, of Dudley, for a summons for an alleged libel against Mr. J. P. Baker, Her Majesty's Inspector of Mines for South Staffordshire and East Worcestershire.—Mr. Underhill, in making the application, said his client was desirous of bringing the matter before the Court, inasmuch as it bore considerably upon the due administration of justice. He reminded the Stipendiary that, under the Mines Regulation Act, a case had recently been decided by him against a Mr. Latham, in which Mr. Johnson was the principal witness for the defence. The public importance of the application was manifested by the fact that it directly affected the manner in which evidence in future would be tendered.—Mr. Spooner: But as the charge involved is against Mr. Baker, who holds so responsible a position, I think it would be far better to communicate direct with the Secretary of State.—Ultimately the consideration of the application was adjourned for a week.

REPORT FROM SCOTLAND.

Jan. 21.—The Warrant Market since the date of our last report has been somewhat irregular, fluctuating between 105*s.* and 107*s.* 6*d.*, with a fair amount of business, closing on Friday at 107*s.* On Monday the market opened at 106*s.*, advanced to 107*s.*, and closed buyers 106*s.* 6*d.* Yesterday and to-day the tone was quiet, and only a limited business done, from 106*s.* 6*d.* to 106*s.* 3*d.* cash, closing buyers at better price. The undernoted prices for makers' iron again show some slight reductions as compared with those of last week:

| | No. 1. | No. 3. |
|---|---------------------------|---------------------------|
| G. M. B., at Glasgow (deliverable alongside)..... | 107 <i>s.</i> 6 <i>d.</i> | 105 <i>s.</i> 6 <i>d.</i> |
| Gartsherrie ditto ditto..... | 113 0 | 107 6 |
| Coltness ditto ditto..... | 118 0 | 108 0 |
| Summerlee ditto ditto..... | 112 6 | 106 0 |
| Carnbroe ditto ditto..... | 110 6 | 107 0 |
| Monkland ditto ditto..... | 107 6 | 105 6 |
| Clyde ditto ditto..... | 107 6 | 105 6 |
| Govan, at Broxmirelaw ditto..... | 107 6 | 105 6 |
| Lungloan, at Glasgow ditto..... | 112 6 | 107 0 |
| Calder, at Port Dundas, ditto..... | 112 6 | 107 6 |
| Glenarnock, at Ardrossan ditto..... | 112 0 | 107 6 |
| Eglington ditto ditto..... | 107 0 | 105 0 |
| Dalmellington ditto ditto..... | 107 0 | 105 0 |
| Curran, at Grangemouth, selected, ditto..... | 112 6 | 108 0 |
| Shotts, at Leith ditto..... | 112 6 | 108 0 |
| Kinnell, at Boness ditto..... | 107 6 | 103 6 |
| Bar iron..... | 213 0 | |
| Nail rods..... | 13 0 | |

SHIPMENTS.

| | |
|---|--------|
| Week ending Jan. 18, 1873.....Tons | 9,270 |
| Week ending Jan. 17, 1874..... | 7,236 |
| Decrease..... | 2,034 |
| Total decrease since Dec. 25, 1873..... | 11,724 |
| Imports of Middlesbrough pig-iron into Grangemouth: | |
| Week ending Jan. 17, 1874.....Tons | 3,050 |
| Week ending Jan. 18, 1873..... | 1,032 |
| Increase..... | 2,018 |
| Total increase for 1874..... | 4,390 |

The prices of hematite ore have not advanced as was expected, and with the exception of a solitary port—Santander—the supplies from Spain have been suspended. Smelting is not progressing here to any large extent, but the furnaces are kept well in blast, and the outcome of the year is expected to exceed that of 1873. A fair business is being transacted in Malleable Iron, which is expected to be exceeded as spring approaches; and as the machinery is well employed, a tendency to better prices is being approached. A reader market is also being found for Finished Iron, and the Messrs. Baird, of Gartsherrie, have nearly completed an erection for the manufacture of their coal-cutting machines at Sunnyside Station, on the Coatbridge line. Rochsolloch works, after undergoing repairs, have been started anew. The decline in the price of fuel is influencing the market and bringing out orders. Quotations unaltered from last week. The reduction in puddlers' and millmen's wages has met with no opposition.

Coals are falling in price, and this, unfortunately, has had no effect on the market. In the week just closed the exports were 26,422 tons, against 11,427 tons in the same week of last year. The general tendency of prices is to a decline, and both in Lanark and Ayrshire prices have had to be reduced to meet buyers' terms. Colliers' wages are also being slowly brought to a lower level, and there is the appearance of this being accomplished without much disorganisation or striking. At the Excelsior Ironworks, Wishaw, the strike has been brought to a close entirely in favour of the company, after a loss of about 44*l.* per man in wages. In Fifeshire coals and miners' wages are being reduced simultaneously. The East Coast trade is quieter, and the shipping consignments are being reduced to a minimum. Dross and coals are cheaper by 2*s.* a ton, and this is the case generally in the coal-producing area of Scotland.

Messrs. Walker and Stewart have recently taken possession of the Temple Pit, Dalry, where they propose working household coal. Already a certain quality of their coal is in the market, which is sold at a figure much under present depot prices. It is understood that when their operations are more advanced a good quality of house coal will be had at a reasonable price.

We understand that Mr. Robert Henderson, of Drumpeller Ironworks, has purchased the estate of Dundugan, lately belonging to the Messrs. Wilson, who carried on the well-known ironworks upon it for many years.

Coal oil and petroleum keep depressed, and prices are wholly unremunerative. Shale oils, 11*d.* to 12*d.* 4*d.* for standard white, and with large stocks not much doing. Lubricating is in better demand, and find a ready sale at 16*s.* 15*d.* to 19*s.* per ton.

Our Share Market has been pretty buoyant lately, and mining shares have improved. Canadian Pyrites to 65*s.*, Emmas to 73*s.*, and although Tharsis have fallen it is expected to be only temporary.

TRADE OF THE TYNE AND WEAR.

Jan. 22.—There is no particular movement in the Coal and Iron Trades, the coal trade being remarkably quiet; yet a good business continues to be done in most kinds, and prices are rather stiffer for steam and house coals. The continued mild character of the winter has, however, had a depressing effect upon the house coal trade. The demand for steam coal at Blyth and on the Tyne is excellent, and as the Baltic is expected to be opened early the prospect for that trade is extremely good. A new shaft of large size is to be sunk by the Cowpen Coal Company, which will still further develop that already extensive concern. The Stanington Coal Company are also advertising for tenders for sinking a large shaft. The state of the coal and coke trades in Durham may be described as extremely quiet, only one reason for which can be assigned, and that is that the demand barely equals the supply, or perhaps it is a little below it. The men are turning out good supplies of coal, and in Cleveland they are also turning out good supplies of ore. During the past year the attention of viewers and mining engineers has been especially directed to the output of an increased quantity of coal—that is, to make, if possible, the quantity drawn at each shaft according to the present system in ten hours equal to the quantity formerly drawn in twelve hours, and this has been nearly accomplished in many instances, even with the engines formerly employed, simply by reducing the amount of time expended at the top and bottom of the shaft after the accomplishment of each journey. When old shafts are used of small size it is necessary to draw several wagons by so many platforms, or stories, and an ingenious contrivance is about being introduced here for the purpose of effecting the delivery of the full tubs and replacing the empties in a much shorter time, and with less expenditure of hand labour, than formerly. This apparatus is in actual work with the best results in the Midland Coun-

ties, but the precise locality we cannot at present give. It is, however, known as "Fowler's Patent Hydraulic Winding Gear." It is stated on good authority that in a great number of cases the output will be increased by using this apparatus 200 tons per day. It is also stated that the cost—that is, the wear and tear of ropes—will be much reduced by its use. This is extremely probable, as the cages are moved by means of hydraulic power, independent of the engine—that is, while loading and unloading at the top and bottom of the shaft; and this is effected not in rotation, but the tubs are changed simultaneously, so that with a cage of four decks the saving of time effected at each draw amounts to no less than 45"—a very important saving indeed. This apparatus has been introduced here by Mr. Morison, M.E., Collingwood-street, Newcastle, and he is now erecting it at the St. Hildas Collieries, South Shields, under the management of Mr. May, and it will doubtless get a fair trial there.

The raw Iron Trade continues very quiet, although a good business has been done lately in pig; but the opinion is pretty generally expressed that the present prices will not be long maintained. Whether this opinion rests on a good basis we cannot say, but metal merchants generally entertain it.

Sinkings and borings continue to be made, not only in vacant coal fields not previously occupied, but also to greater depths below the seams that have been worked for ages in the county of Durham. The Busty seam was got some time ago at the Felling Colliery, about 50 fms. below the Hutton seam, which was long considered to be the lowest workable seam of any value in East Durham, and lately a boring has been made by machinery at the Usworth Colliery, and it is stated that the Busty seam has also been found there of good quality. This is certainly very important, as it is several miles south of Felling. At Urpeth, on the west side of the famous wash which takes all the seams off down to the Hutton seam, the Busty seam has been proved, and is now being worked successfully; and the Ouston Coal Company, the owners of the Urpeth Colliery, have now a shaft pretty far advanced on the Black Fell, east of the wash referred to, which is to be put down to work the Busty seam also. This latter shaft is situated about four miles south-west from the Usworth Colliery. It will, therefore, be seen from this rapid glance that this famous seam is almost certain to be found over the greater part of the coal field in East Durham; a very important circumstance in connection with the duration of this coal field.

COAL MINES EXAMINATION.—I have seen enquiries from correspondents as to the course pursued at the examination for certificates of competency: this will be well understood from the following particulars of the proceedings of an "Examination" at Darlington. The candidates—17 in number—came from various parts of the district under the jurisdiction of the South Durham Board, which comprises the Whitby, Cleveland, Westmoreland, and South Durham mining districts. The examination was conducted by Mr. J. Daglish, M.E., of Tyne-mouth; Mr. A. L. Stevenson, M.E., of Durham; Mr. John Forman, of Grahamside. The secretary of the board, Mr. Bartlett, jun., was also present. The qualifications necessary to be possessed by the candidate require either a long-learned practical experience in mining work, such as having served for a term of five or more years in some position similar to an underminer or overman; or where professional experience has been obtained, a somewhat shorter period of practical experience is admissible. In the case of students at the various Colleges of Physical Science, evidence of their attendance at such institutions is accepted as the equivalent of some portion of the professional training. Very stringent testimonials are prescribed as to the character and fitness of the candidates for the post of mines' managers, which the successful passing of this examination holds out to them. The subjects of the examination comprised the geology of Northumberland and Durham, especially in reference to the coal formation; the practice and theory of ventilation, and the nature and properties of gases; the practical knowledge of the machinery and boilers generally in use in collieries; underground surveying; practical mine working; an acquaintance with the provisions of the Coal Mines Act of 1872. The examination lasted upwards of eight hours, in addition to which each of the candidates underwent a *practical* examination.

REPORT FROM LANCASHIRE AND CHESHIRE.

Jan. 22.—During the past week the demand for coal has improved slightly, but trade continues dull. Price have not been altered; there seems, however, every probability of further reductions. For some of the better qualities of coal the requirements are still not more than met; of inferior sorts there is an abundant supply, and at many collieries stocks are rapidly increasing. The labour market is settled, except at Haydock and Burnley, where the disputes continue without the slightest prospect of settlement. The long fight at Burnley and the pertinacity with which the colliers are adhering to their demands at Haydock are beginning to have an effect upon the relationship of capital and labour throughout the district. The men have the notion that because they have held out so long at Burnley, and have so nearly gone on strike at Haydock, a general turn-out would be quite a simple matter. At Ashton and Oldham, where a reduction of wages was announced, the parties concerned have sensibly referred the matter to arbitration.

In the Iron Trade prices are a shade firmer for foundry pig-iron, for which the demand is considerably better. Manufactured iron rates are lower, without much sign of improvement. For iron ore there is still much request. Engine makers are busy, but tool makers and machinists complain of a scarcity of orders.

An inquest was held at Pemberton, near Wigan, touching the death of a miner named John Waring, employed at Mr. N. Ekersley's Worsley Menes Colliery. Deceased had been killed through the overwinding of a hopper of material, a portion of which fell back into the pit. It was proved that the engineman had been on duty 36 hours, and so he "missed his sight." The jury in their verdict attributed the death to the culpable oversight of the engineman, at the same time expressing the opinion that he had been kept on duty too long without being relieved.

At a crowded meeting at Wigan, on Monday night, it was resolved unanimously to "run" Mr. Wm. Pickard, the well-known miners' agent, as a labour candidate for Wigan at the next general election.

One of the most important prosecutions that have been undertaken against Trade Union leaders is being tried at Burnley. The executors of the late Mr. Hargreaves, who own a number of collieries in that district, have been engaged for a long time in a conflict with the Miners' Union, and last year they engaged a number of miners from Cornwall and elsewhere to fill the places of men who had left or been discharged on account of their connection with the Miners' Union. The unionists, it is alleged, entered into a conspiracy to induce these men to leave the pits and the town, and the charge now under investigation arises out of their proceedings. Mr. Halliday, the well-known president of the Miners' Union, is charged, along with 10 other leading unionists, with the offence of conspiracy. It is probable that the hearing of the case will be very protracted.

REPORT FROM DERBYSHIRE AND YORKSHIRE.

Jan. 22.—In connection with lead mining in Derbyshire, it is a rather extraordinary fact that the increase in the number of mines has in no way led to an increase in the production of ore. With something like 180 mines in the county, there are not more than a dozen where the yearly output can show three figures. As might be expected, Messrs. Wass and Son are the largest producers, the Mill Stoop Close Mine showing to the best advantage in the last returns. The Bage Mine, close to the old Roman town of Wirksworth, also belonging to the Wass family, has been doing very well. But lead mining in the county, for some reason or other, is by no means popular, and capitalists appear to have no faith with regard to the mineral fields that permeate a very large portion of the county, which, unfortunately, is land locked, having no communication whatever with any line of railway. Were it not for its inland position there is little doubt but the lead mines of Derbyshire would have been developed to a much greater extent than they now are. What, therefore, but little attention is paid to lead, there appears to be almost any amount of money to invest in collieries. No sum appears to be too large to offer for any small concerns, despite the fact that prices of coal in London are now fully 8*s.* per ton less than they were this time last year. With all those facts before them, and the many new collieries being opened out, and there is no lack of persons to be found willing to purchase collieries at whatever sum may be asked for them. The trade, too, cannot be said to be an inducement, for it was never quieter for the time of year than it now is. Hundreds of loaded wagons are to be seen at stations and depots, whilst very many collieries are only working short time, or stacking coal at the pit's bank.

The Clay Cross Company, the largest purveyor of coal to the metropolis by railway, who about a month since gave notice to their men that they would have to submit to a reduction of 3*d.* per ton, owing to the fall in the price of coal in London and elsewhere. As might be expected, the men did not submit to such a proposition, and the result has been that the notice has been extended another fortnight, and terminates on Wednesday next. In South Yorkshire also the urgency of a reduction of colliers' wages is being discussed, and there is every reason to believe that a general lowering of wages in all our mining districts is on the eve of taking place. There has been no change with regard to the Sheffield trades, excepting that prospects are becoming rather brighter. A large number of the men are still on strike, and show no disposition to accept work on their employers' terms. Several new collieries in South Yorkshire have changed hands, and others are in a fair way of doing so, and at very large prices. Indeed, we know of something like 20,000*l.* being offered for the reversion of a lease of a large field of coal; but even that is cheap when capitalists have purchased small concerns at enormous prices, rendering it impossible that they can pay dividends worth speaking of, even should coal continue at its present price, which is far from likely.

OPENING OUT OF NEW COAL FIELDS.—In the southern part of the Midland coal field, the largest in England, and extending from Leeds to Nottingham, the greatest activity prevails in the opening out of several very large coal fields on the estate of the Duke of St. Albans, at Beestwood Park, and adjoining Butwell Forest; shafts are being sunk to the top hard or Barusley Thick coal under the magnesian formation. The seam, it is expected, will be reached at a depth of from 550 to 600 yards from the surface. At Linby, near to Newcastle Abbey, a good start has been made on the estate of A. Montague Wilson, Esq., of Melton Hall, Yorkshire. The coal field embraces an area of about 6000 acres, and the depth of

WOOD SLAB PAVEMENT COMPANY (Limited).—Capital 100,000*l.*, in 10*l.* shares. To acquire patents in connection with wood paving. The subscribers (who take 25 shares each) are—Francis Bennoch, 80, Wood-street, E.C.; A. Langdale, 4, King-street, Cheapside; T. H. Morton, Adelaide-road, St. John's

IN THE MATTER OF THE COMPANIES ACTS, 1862 AND 1867,
AND
IN THE MATTER OF THE TREVISCOE IRON COMPANY (LIMITED).
IN LIQUIDATION.

THE LIQUIDATOR IS PREPARED TO RECEIVE TENDERS for the PURCHASE of the TREVISCOE IRON MINE, situated in the parish of St. Stephen's, about six miles from St. Austell, Cornwall, and within two and a half miles of the Bodennick and High-street ridings of the Cornwall Railway.

Forms of tender and particulars to be had on application to the Liquidator, Mr. JAMES WADDELL, Mansion House Chambers, 12, Queen Victoria-street, London; or the Solicitors, Messrs. TATHAM AND SON, 17, Old Broad-street, E.C.

IN THE MATTER OF THE HAMMETT MINE COMPANY.

NOTICE.—By RESOLUTION passed at the SPECIAL GENERAL MEETING, HELD on the 31st December, 1873, and confirmed by Special Meeting held on January 21st, 1874, the HAMMETT MINE was ORDERED to be WOUND-UP voluntarily, and I, the undersigned EMANUEL BEAZLEY, of 9D, New Broad-street, in the City of London, was appointed Liquidator.

All debts due to the estate must be paid to me. Creditors having claims must forward full particulars on or before the 1st of March next, or they will be excluded from participating in the assets of the estate. EMANUEL BEAZLEY, Liquidator.

LUMLEY AND LUMLEY, Solicitors, 15, Old Jewry Chambers, in the City of London.

IN THE MATTER OF THE COMPANIES ACTS, 1862 AND 1867;
AND OF THE
EAST FOXDALE SILVER-LEAD MINING COMPANY (LIMITED).

NOTICE IS HEREBY GIVEN, that ALL CREDITORS and OTHER PERSONS having any DEBT, CLAIM, or DEMAND against the above-named company are hereby required to SEND IN the PARTICULARS of all such DEBTS, CLAIMS, and DEMANDS to RICHARD MITCHELL, of No. 4, Abchurch Chambers, Abchurch-yard, in the City of London, and HENRY JAMES WENHAM, of No. 42, Finsbury Circus, in the City of London, the Liquidators of the said company, at the office of the said company, 4, Abchurch Chambers, Abchurch-yard, in the City of London, on or before the 14th day of February, 1874; and, in default thereof, they will be EXCLUDED from the BENEFIT of any DISTRIBUTION made before such DEBTS, CLAIMS, and DEMANDS are PROVIDED.

SOUTHGATE AND WATSON, 7, King's Bench Walk, Temple London. (Solicitors for the Liquidators.)
Dated the 24th day of January, 1874.

THE RICHMOND CONSOLIDATED MINING COMPANY (LIMITED).

Notice is hereby given, that an EXTRAORDINARY GENERAL MEETING of the shareholders will be HELD on TUESDAY, the 27th instant, at One o'clock at the Terminus Hotel, Cannon-street, London, for the purpose of meeting the company's Representatives who have just returned from the Mine.

By order of the Board, THOS. WESTBURY HALL, Secretary.
61, Moorgate-street, London, E.C., 20th January, 1873.

THE BELSTONE MINING COMPANY (LIMITED).

Notice is hereby given, that the ORDINARY HALF-YEARLY GENERAL MEETING of the shareholders will be HELD at the offices of the company, No. 2, Royal Exchange Buildings, in the City of London, on FRIDAY, the 30th day of January instant, at Twelve o'clock noon, precisely, to receive and consider the report of the directors, and the audited accounts and balance-sheet of the company, for the past year.

Notice is hereby further given, that an EXTRAORDINARY GENERAL MEETING of the shareholders will be HELD at the offices of the company, on FRIDAY, the 30th day of January instant, immediately after the business of the ordinary general meeting has been transacted, for the purpose of considering the desirability of increasing the capital of the company, and of passing the necessary special resolutions for carrying the determination of the meeting into effect.

The Transfer-Books of the company will be closed from the 17th to the 30th day of January instant, both days inclusive.

By order of the Board, FRAS. R. REEVES, Secretary.
2, Royal Exchange Buildings, London, 17th January, 1874.

THE PORT PHILLIP AND COLONIAL GOLD MINING COMPANY (LIMITED).

Incorporated by Royal Charter, and under the Companies Acts of 1862 and 1867. Notice is hereby given, that the ORDINARY GENERAL MEETING of the shareholders of this company will be HELD at the Cannon-street Terminus Hotel, Cannon-street, in the City of London, on THURSDAY, the 29th day of January, 1874, at One o'clock precisely, in pursuance of the deed of settlement, to receive the directors' report and the accounts, re-elect retiring officers, and to transact such other business as may be necessary.

By order, J. W. PURCHASE, Secretary.
Offices, 30, Moorgate-street, London, E.C., 12th January, 1874.
N.B.—The Transfer Books of the Company will be closed from Wednesday, the 28th January, until Thursday, the 12th February next, both days inclusive.

VICTORIA (LONDON) MINING COMPANY (LIMITED).

Notice is hereby given, that the ORDINARY GENERAL MEETING of the shareholders of this company will be HELD at the Cannon-street Terminus Hotel, Cannon-street, in the City of London, on THURSDAY, the 29th day of January, 1874, at Two o'clock in the afternoon precisely, for the following purposes:—

To receive and consider a report of the proceedings of the company, and a statement of the accounts since the last Ordinary General Meeting.

To elect directors in the place of R. H. Bland, Esq., and E. Westby, Esq., who retire by rotation, and offer themselves for re-election.

To elect auditors for the ensuing year.

By Order, J. W. PURCHASE, Secretary.
Offices: 30, Moorgate-street, E.C., 12th January, 1874.
N.B.—The Transfer Books of the company will be closed from Wednesday, the 28th January, 1874, until Thursday, the 12th February, 1874, both days inclusive.

TO GAS COMPANIES, COAL MERCHANTS, AND OTHERS.

SMALL SILKSTONE COLLIERY FOR SALE (100 to 150 tons per day), working the BLACK SHALE or SILKSTONE SEAM. Situate near a main line of railway. Apply to Messrs. CORBETT and WOOD, 31, High-street, Sheffield.

STEAM ENGINES AND STAMPS FOR SALE.

ONE 50 in. cylinder PUMPING ENGINE, 9 ft. stroke, equal beam, with ONE BOILER, crab winch, and first piece of main rod.
ONE cast iron BALANCE BOB, with hanging rod.
ONE 24 in. cylinder WINDING ENGINE, 8 ft. stroke, with iron drawing cage, and ONE BOILER, complete.
36 heads of STAMPS, with stands, frames, lifters, &c.
Apply to WM. LANGDON, Northumberland Foundry, Launceston, Cornwall.

RAILS (IRON) FOR SALE.

NEW PERFECT FLANGE RAILS, 40, 60, 72, 74, and 75½ lbs. per yard; also, SLIGHTLY DEFECTIVE FLANGE RAILS, 40, 50, 72, and 74 lbs. per yard.
For particulars and prices apply to W. G. FOSSICK, 6, Laurence Pountney-hill, London.

RAILS FOR SALE, in great variety of sections (perfect, slightly defective, and second-hand), 14 to 82 lbs. per yard. Also CHAIRS and the other NECESSARY FITTINGS.

Apply to BREYEN, RICHARDSON, and CO., Newcastle-on-Tyne.

ON SALE.—MASSIVE CRUSHING MILL, with two pairs of 24-in. rolls, in cast metal frames.

Also, 250 yards of 1½ in. diameter IRON WIRE WINDING ROPE. Address, "X. Y. Z.," MINING JOURNAL OFFICE, 26, Fleet-street, London.

FOR SALE, THE BRITISH PATENT FOR DUBOIS'S

LOWERING APPARATUS. Applicable to SIDE-HILL MINES, QUARRIES, &c.; also LARGE WAREHOUSES.
Communications addressed to Mr. WM. HUTCHINSON, Broomhall Park, Sheffield will receive prompt attention.

MESSRS. CAMERON AND CO., FINANCIAL AGENTS

AND SHARE BROKERS.
BRIDGE STREET CHAMBERS, CHESTER.

MESSRS. S. R. COCKS AND CO., MINING ENGINEERS, &c.,

ROCHE, ST. AUSTELL.

COPPER MINE GRANT OR SETT FOR SALE.

TIN MINE " " " " " "

SLATE QUARRY " " " " " "

CHINA CLAY " " " " " "

IRON MINES " " " " " "

Also, 24 heads of STAMPS, iron axles, four cams to the round, and dressing appliances.

Prices and particulars on application.
Mines inspected, and confidential reports and surveys made.

MR. T. L. COTTINGHAM OFFERS TO CAPITALISTS:—

ONE SILVER-LEAD SETT, proved very rich.

ONE LEAD ditto.

ONE IRON ditto.

And a PROPRIETOR'S INTEREST in a RICH GOLD SETT.

FOR SALE—A CAPITAL PERCUSSION TABLE, in first rate condition.

Mold, Dec. 22, 1873.

MESSRS. R. SYMONS AND CO.,

LAND AND MINE SURVEYORS, AND LITHOGRAPHERS,
11, PARADE, TRURO.

Plans of every description prepared from actual survey, or from drafts furnished. Plans, sections, prospectuses, &c., lithographed in any quantity.

The condition of any mine truly described upon request.—Truro, Jan. 14, 1874.

MR. J. S. MERRRY,

ASSAYER AND ANALYTICAL CHEMIST
SWANSEA.

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the EAST PROVIDENCE MINING COMPANY.—By direction of His Honor the Vice-Warden, notice is hereby given that, on Thursday, the 5th day of February next, at the Registrar's Office, at Truro, Cornwall, at Eleven o'clock in the forenoon, this Court will PROCEED to MAKE a CALL of SIXTEEN SHILLINGS AND SIXPENCE PER SHARE on all the contributors of the said company settled on the List of Contributors as present members thereof.

All persons interested therein are entitled to attend at the time and place aforesaid to offer objections to such call. FREDERICK MARSHALL, Registrar.

Dated Registrar's Office, Truro, January 21st, 1874.

UPTON IRON MINES, BRIKHAM, DEVON.

TO MINE SPECULATORS, AND OTHERS.
MR. J. ADAMS WILL SELL, BY AUCTION, at the Bolton Hotel, in Brixham, on Tuesday, the 27th of January, 1874, on such conditions as shall then be produced, the very valuable ROYALTY DUES, with the RIGHT and LIBERTY of MINING on the UPTON ESTATE, for the unexpired part of a term of 21 years, from the 25th of December, 1867, granted by a Lease, dated April 3rd, 1868, which will be produced at the auction.

By the above lease liberty is granted to the lessee to MINE and RAISE IRON ORE on upwards of 170 acres of the above estate. The royalty dues are 1s. 3d. per 21 cwt., and these mines have been very successfully worked for about 30 years, and contain an inexhaustible amount of iron of the best quality, which is found near the surface, and water on the property can be used for washing, if desired. The estate is situated adjoining the sea, where water-carriage can be made available; it is also within about one mile from the Brixham Quay, where the ore is usually shipped, and the lessee's interest in the above has lately been sold for a very considerable sum—therefore this offers an opportunity to persons rarely to be met with.

For viewing, apply to PETER VINCENT, at Lock's Cottage, near the Estate, Tuesdays and Fridays; and for further particulars to Mr. JOHN ADAMS, Surveyor, Newton Abbot, at whose offices the lease and plan of the estate can be seen on any Wednesday before the sale. Sale to commence at Three P.M.

N.B.—FOR SALE, BY PRIVATE CONTRACT, about SIXTY DOZEN of PRIME CLARET, direct from Bordeaux.—Apply to Mr. ADAMS, as aforesaid. General Surveying Offices, Newton Abbot, Devon, January 6th, 1874.

SARE MATERIALS AT WEST WHEEL JEWELL.

JOHN THOMAS AND W. T. DAVEY have been favoured with instructions TO SELL, AT PUBLIC AUCTION, on Monday, February 2nd, at Twelve for One o'clock precisely, at the Account-house of the West Wheel Mine, between St. Day and Redruth, the following VERY VALUABLE SARE

MACHINERY AND MATERIALS, viz.:

ONE 54 in. cylinder PUMPING ENGINE, 9 ft. stroke, equal beam.
ONE 11 ton BOILER (nearly new); ONE 11 ton BOILER.
ONE STEAM STAMPING MACHINE and MULTITUBULAR BOILER.
ONE 60 ft. SLEARS, with shafts, &c., complete.
ONE 10 in. CAPSTAN.
200 fms. 12 in. capstan rope, nearly new.
1 new balance bob, complete.
1 2 limbed fend-off bob, with bishops' heads and strappings, complete.
50 14 in. 9 ft. pumps.
3 13 in. ditto.
22 12 in. ditto.
3 13 in. matchings.
1 12 in. cylinder windbore.
1 12 in. doorpiece.
1 12 in. working.
1 12½ in. flat bottom windbore.
1 12½ in. doorpiece.
1 12½ in. working barrel.
1 12 in. flat bottom windbore.
2 12½ in. plunger poles, stuffing boxes, and glands.
1 12 in. ditto ditto.
A considerable sum has recently been laid out on the 54 in. pumping engine to put it into first class order, and the other machinery and materials are in a thoroughly good condition.

Refreshments at Twelve. Sale at One to the minute.

The mine is situated about a mile and half from the Scourier and Redruth Railway Stations, and close to the main road.

For further particulars, apply to MATTHEW GREENE, Esq., Gresham House, London; Captain JOSEPH MITCHELL, the Manager, on the Mine; or to the Auctioneers, at their respective offices, Redruth.
Dated January 20th, 1874.

VERY VALUABLE MINE MACHINERY AND MATERIALS.

WHEEL ROSE UNITED MINES, CORNWALL.

JOHN THOMAS AND W. T. DAVEY, Auctioneers, Redruth, have been favoured with instructions TO SELL, AT PUBLIC AUCTION, at the Account-house of the Wheel Rose United Mine, near the Scourier Station on the West Cornwall Railway, and about two miles and a half from the town of Redruth, on Monday, February 2nd, at Twelve o'clock, the WHOLE of the FIRST-CLASS

MACHINERY AND MATERIALS, consisting of—

ONE 80 in. cylinder PUMPING ENGINE, 10 ft. stroke, equal beam, with THREE 15 ton bi-tubular BOILERS (33 ft. long each), with steam pipes and fittings, complete. There has been about £1200 recently spent to put this engine into first class order, under the superintendence of Messrs. J. Hocking and Son, the celebrated Cornish mining engineers. The condensing water is brass.
ONE 25 in. cylinder horizontal WINDING ENGINE, with ONE 10 ton BOILER, with whim cage, &c. This is a very high class machine.
1 balance bob.
1 steam capstan.
1 60 ft. shears, shafts, blocks, &c.
220 fms. 16 in. capstan rope (new).
120 fms. 9 in. ditto ditto.
2 tons 5 in. and other size chain.
60 fms. 20 in. pumps.
1 20 in. 10 piece.
1 20 in. top doorpiece.
1 20 in. windbore.
1 14 ft. 19½ in. brass lined working barrel and case, with brass bucket forms, seatings, valves, &c.
45 fms. 14, 15, and 16 in. pumps.
1 15 in. H piece, doorpiece, and windbore.
1 15 in. plunger pole, with stuffing box and glands (brass bushed).
70 fms. 16 in. pitch pin rods.
30 pairs large size hammered and rolled strapping plates.
2 pair large main caps.
4 3 ft. shaft rolls, with gudgeons, brackets, &c.
50 pairs staples and glands.
Refreshments at Twelve noon precisely. Sale at One to the minute.
For further particulars, apply to Messrs. J. HOCKING and SON, Engineers, Redruth; Capt. GEORGE TREMAYNE, the Manager; or to the Auctioneers, at their respective offices, Redruth.—Dated January 17th, 1874.

FOREST OF DEAN, GLOUCESTERSHIRE.

HIGHLY IMPORTANT SALE OF VALUABLE COLLIERY, FREEHOLD COTTAGES, AND GARDENS.

MR. CHARLES ROBERTS has been favoured with instructions from Messrs. James and Henry Harris to SELL, BY PUBLIC AUCTION, at the King's Head Hotel, Ross, on Tuesday, February 3, 1874, at Three for Four o'clock in the afternoon, in One Lot, subject to such conditions as shall then be and there produced, all that VALUABLE COLLIERY, known by the name of—

OLD ENGINE COLLIERY.

situate at Lydbrook, in the Forest of Dean, comprising about FORTY-FIVE ACRES of UNWROUGHT COAL, of the well-known "Coleford High Delf Vein," which is from 4 to 6 ft. thick, and a great portion of which has a good rock roof.

Also THREE COTTAGES and GARDENS adjoining, in the occupation of respectable monthly tenants.

The above colliery is most advantageously situated, being within 100 yards of the Severn and Wye Railway, and 80 yards of the turnpike road leading from Lydbrook to the Forest, and within about a mile of the very extensive iron and tin-plate works at Lydbrook, at which works this vein of coal is exclusively used. It is, without doubt, in one of the most commanding positions in the district for both local and railway trade.

A pit, of ample size, has been sunk to a depth of about 41 yards on the deep boundary, to and through the coal, in the Lydbrook Valley. The coal is of excellent quality, suitable for house, gas, steam, and manufacturing purposes.

Nearly one half of this colliery may be worked free of water, and is an entirely new work, no heading having been driven more than 40 yards from the bottom of the shaft, and the coal proved to be of the very best quality, and free from faults.

The use of the Worrall Hill Level for pumping into and ventilating through is reserved, so as to prevent sinking a second shaft.

Tenure: It is held by grant from the Crown to free miners, on the usual terms. Royalty, 2d. per ton; dead rent, £10 per annum. This is paid by the lessee of the Worrall Hill Level.

Part of the purchase-money may remain on mortgage, if desired.

Plans may be seen, and all particulars furnished, on application to Mr. JAMES HARRIS, Telford House, Ross, Herefordshire; Mr. HENRY HARRIS, Lydbrook, Gloucestershire; Mr. JOHN HARRIS, Edenwall House, Coleford; Mr. W. ROBERTS, jun., solicitor, and of the Auctioneer, both of Coleford, Gloucestershire.

Mr. HENRY HARRIS and Mr. JOHN HARRIS will show the property.

RARE OPPORTUNITY FOR MAKING A FORTUNE.

TO BE SOLD, PART OR ENTIRE (former preferred) of a COLLIERY ROYALTY IN NORTH WALES, bordering on the London and North-Western Railway, and close to a shipping port. There are several shafts partially sunk, some requiring to be sunk still deeper, but operations stopped for want of capital. There are four seams of good house and steam coal proved in an area upwards of 400 acres of surface. Holder will sell the entire, including the present plant (not sufficiently powerful for sinking further) for £4000, but would prefer taking a PARTNER, who would advance the necessary capital for half profits, which in the present state of the coal trade are almost fabulous.

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PRELIMINARY ADVERTISEMENT—ISLE OF MAN.

VALUABLE LEAD MINES, IN FULL WORKING, WITH THE FIXED PLANT AND MACHINERY, WITH POSSESSION.

MESSRS. FULLER, HORSEY, SON, AND CO. are instructed by the Liquidators of the EAST FOXDALE SILVER-LEAD MINING COMPANY (LIMITED), TO SELL, BY AUCTION, at the Mart, Tokenhouse-yard, early in February next,

THE EAST FOXDALE LEAD MINE,

Situate in the ISLE OF MAN, seven miles from the town and shipping port of Douglas, and adjoining the celebrated Foxdale Mine (of whose valuable sett it up to a short time since comprised a part), and, being over 1½ mile in length, is traversed by three known lodes.

There are THREE PRINCIPAL SHAFTS, sunk to a considerable depth, and the MACHINERY includes a 56 in. cylinder PUMPING ENGINE, with TWO tubular BOILERS; 18 in. cylinder horizontal WINDING ENGINE, with gear; DRIVING CRUSHER, with two pair rolls; DRAWING MACHINE; DONKEY ENGINE; and the necessary PLANT and PITWORK for working the mine. Held on lease from the Crown for an unexpired term of about 26 years, at a royalty of 1-12th, and a nominal rent of £41 per annum.

Detailed advertisements will shortly appear, and particulars are in preparation, and when ready may be had of Messrs. SOUTHGATE and WATSON, Solicitors, 7, King's Bench Walk, Temple, E.C.; of Messrs. MITCHELL and WENHAM, Liquidators, Abchurch Chambers, Abchurch-yard, E.C.; of Messrs. WENHAM and SCRIMSHOUSE, Accountants, 42, Finsbury-circus, E.C. at the Mart; and of Messrs. FULLER, HORSEY, SON, and Co., 11, Billiter-square, E.C., or will be forwarded on application.

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THE LEASEHOLD MINERAL GRANT, OR ESTATE, now known as

THE CARDIGANSHIRE OLD BOG MINE.

Situate in the parish of LLANBADARNFAWR, in that county, held for a term of 1 years from the 21st day of December, 1868, together with the hydraulic and other MACHINERY, FIXTURES, PLANT, and APPARATUS, PUMPS, and EFFECTS, comprising an iron everest WATER-WHEEL, 33 ft. diameter, with 3 ft. 6 in. breast high fly-wheel, with driving gear complete, including T-bob, balances, pulleys, standards, 440 yards iron rope, wooden balance, T-bob and cast iron bobs, 25 fms. of 6 in. pumps and necessary pitwork to and below the 24 ft. level, 3 pumps in use as weights on winches, pulley blocks, &c., WILL, subject to conditions, BE OFFERED, as a GOING CONCERN, by order of the mortgagee, FOR SALE, BY AUCTION, in One Lot, by Messrs. HARRIS AND SON, of Wellington, Shropshire, at the Star and Garter Hotel, Wolverhampton, on Tuesday, the 27th day of January, 1874, at Three for Four o'clock in the afternoon precisely.

The property nearly adjoins the turnpike-road from Aberystwith to Llanidloes, being about 11 miles distant from the port and railway station of the former town. Numerous are the veins through this mineral grant.

Workings can be immediately resumed on three good runs of lead ore, each in different lodes, which have great lengths in this sett.

The mine is believed to be very valuable, and well worth the attention of those connected with mines.

The property can be viewed, and full particulars obtained, on application to the Auctioneers, or G. J. BROWNLOW, Esq., 34, Bedford-row, London, W.C., vendor's solicitor.

At the office of the latter a copy can be inspected of the original lease under which this sett, with other properties, is held.

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TO BE LET, FOR A TERM OF YEARS.—Analysis of ore, price, and full particulars, address "O. P. H.," MINING JOURNAL OFFICE, 26, Fleet-street, E.C.

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The Hunstanworth Royalty adjoins the celebrated W.B. Lead Mines, and has for many years yielded large quantities of lead ore, and much of the ground is undeveloped.

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TWO SPLENDID OPPORTUNITIES SUCH AS ARE SELDOM MET WITH—the one, a COTTON SPINNING CONCERN, ready for IMMEDIATE WORKING, and stocked with the most VALUABLE MACHINERY, principally new—the other, a LARGE IRONMONGERY BUSINESS, at present and for the past 22 years in ACTIVE TRADE, and which has always realised very large profits—ARE NOW OFFERING.

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Which have been tried and found to answer the purpose, are
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 FOR PRODUCING SOLID FUEL FROM COAL OR COKE DUST.

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By being able to dispense with the costly processes employed in the manufacture of existing patent fuels, and producing an article free from their defects, this company believe their fuel, when generally known, must supersede all other patent fuels.

By its employment the owners of Anthracite Collieries may utilise the small, which has been hitherto wasted.

The proprietors of Gas Works may by its use bind together and use over again their coke breeze.

Application to be made to the SECRETARY, at the office of the company,—
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OFFICES,—62, ST. VINCENT STREET, GLASGOW.

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This company grant licenses, under their patents, for the use, singly or in combination, of the most approved machinery for dressing ores, comprising Stamps, Jiggers, Classifiers, and Buddles.

MR. GEORGE GREEN, Mechanical Engineer to the above Company, SUPPLIES MACHINES under the above Company's Patents for DRESSING all METALLIC ORES. Dressing floors having these Machines possess the following advantages:

- 1.—They are cheaper than any other kind in first outlay.
- 2.—From 60 to 70 per cent. of the labour is saved.
- 3.—Only about one-fourth of the space usually occupied by dressing-floors is required.
- 4.—The ore is made clean at one operation, and 5 per cent. of ores otherwise lost is saved.

Drawings, specifications, and estimates will be forwarded on application to—
 GEORGE GREEN, M.E., ABERYSTWTH, SOUTH WALES.

EXTRACTS FROM TESTIMONIALS RECEIVED:—

Mr. C. E. BAINBRIDGE, of the London Company's Mines, Middleton-in-Teesdale, by Darlington, writing on the 27th September, 1873, says:—"After a full season's experience of the very complete Dressing Machine erected by you at our Colberry Mines, we are fully satisfied with our decision to adopt your patents in preference to all others. The machinery does its work as well as we can desire, and better than we anticipated. We are now getting through 70 tons of ore stuff per day, of rich quality. Without your machinery we should have been at a standstill, for we cannot get hands to supply our wants elsewhere. It saves fully one-half of the old wages, and vastly more on the wages we now give, and the saving in ore is not much short of 10 per cent. You can quote from this letter as you think proper."

Mr. COULTAS DODSWORTH, of Haydon Bridge, writes, on the 15th January, 1874:—"I have just returned from the Stoneycroft and Greyside Mines, where I have seen your 'Patent Ore Dressing Machinery' at work, with which, I must say, I was highly pleased. It is decidedly the best machinery I have ever seen for the purpose, the results being as near perfection as possible, and I am quite sure its use in this case will be a very great saving to the company. No large mining establishment should be without your machinery, especially when labour is difficult to procure—a mere fraction of the hands being only required as against the old system, and the work altogether much better done, and a great saving of ore effected. I have heard it said that your machinery is better adapted for poor than for rich ores, but from what I have seen to-day I am quite confident it will do for any kind of ores. I beg not only to congratulate, but also to compliment, you on the great success of your 'Patent Ore Dressing Machinery.' You may use this letter as you think proper."

Mr. MONTAGUE BEALE, Managing Director of the Cagliari Mining Company (Limited), says, on May 15th, 1873:—"I have much pleasure in speaking of the great efficiency of your 'Patent Dressing Machinery,' as erected by you at our mines at Rosas, in the Island of Sardinia. You will remember it has always been considered impossible to dress, or rather separate, the minerals our ores contain by machinery, but our captain assures me he gets a constant return of 76 per cent. of lead with the greatest ease, and I know by the returns we are realising the best market price. I consider this company is much indebted to you for the success you have achieved at so small a cost. It may interest you to know, from my experience in several of the British possessions, including the whole of the Australian Colonies, that my opinion is I have never seen any dressing machinery that can efficiently, and at so small a cost, dress, and separate metallic ores, however close the mechanical mixture may be, as yours. You can use this letter in any way you like."

The most satisfactory testimonials also have been received from the GREENSIDE MINING COMPANY, Westmoreland; the TALARGOCH MINING COMPANY, North Wales, and others. Copies of these may be had from Mr. GREEN.

PROFESSOR TENNANT'S LECTURES ON ROCKS AND METALLIC MINERALS, at King's College, are given on Wednesday and Friday mornings from Nine to Ten o'clock, and on Thursday evenings from Eight to Nine. The lectures commence Thursday, 22nd, and will be continued to Easter. PRIVATE INSTRUCTION IN GEOLOGY AND MINERALOGY can be had of Prof. TENNANT, at his residence, 149, Strand, W.C., by those unable to attend public lectures.

GREENER AND ELLIS' IMPROVED FETTLING FOR PUDDLING FURNACES is now in active operation at the SKERNE IRONWORKS, DARLINGTON, and LICENSES may be had for USING the PATENT on application to T. GREENER, STATION STREET, DARLINGTON. The improved yield and quality of iron produced, and the economy effected by the process, render its speedy universal adoption, in these times, a matter of necessity and certainty.—Darlington, January, 1874.

MESSRS. GROSVENOR AND CO., SHAREBROKERS, 88, PORTLAND STREET, MANCHESTER, beg to inform their clients and the public in general that they have for sale a few shares in each of several most promising Progressive Mines, which they fearlessly assert will shortly return to investors enormous profits on a small outlay and at a nominal risk.

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MR. CHARLES F. COLLOM, MINING ENGINEER, INSPECTOR OF MINES, &c., TAVISTOCK. MANAGEMENT OF THE SOUTH DEVON FIRE-CLAY COMPANY.

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THE IRON AND COAL TRADES' REVIEW: ROYAL EXCHANGE, MIDDLESBOROUGH. The IRON AND COAL TRADES' REVIEW is extensively circulated amongst the Iron Producers, Manufacturers, and Consumers, Coalowners, &c., in all the iron and coal districts. It is, therefore, one of the leading organs for advertising every description of Iron Manufactures, Machinery, New Inventions, and all matters relating to the Iron, Coal, Hardware, Engineering, and Metal Trades in general. Offices of the Review: Middlesbrough-on-Tees (Royal Exchange); London 11 and 12, Red Lion Court, Fleet Street; Newcastle-on-Tyne (50, Grey Street).

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J. G. CRANSTON begs to announce that he is now prepared to supply the above machine, for which he has recently secured Letters Patent.

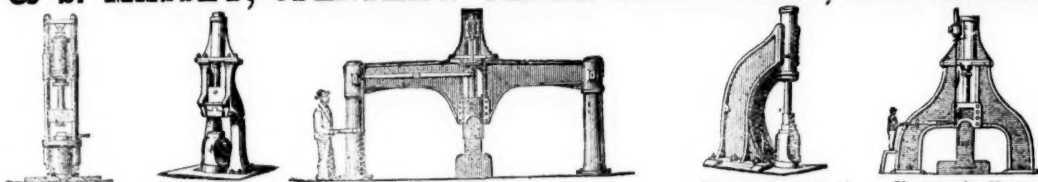
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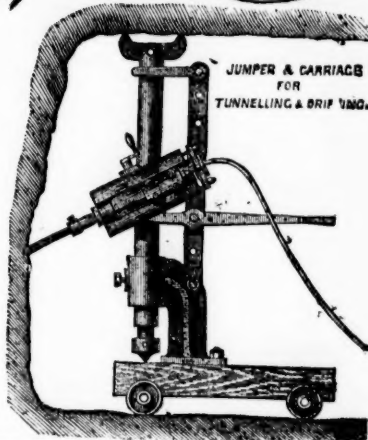
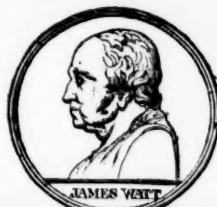
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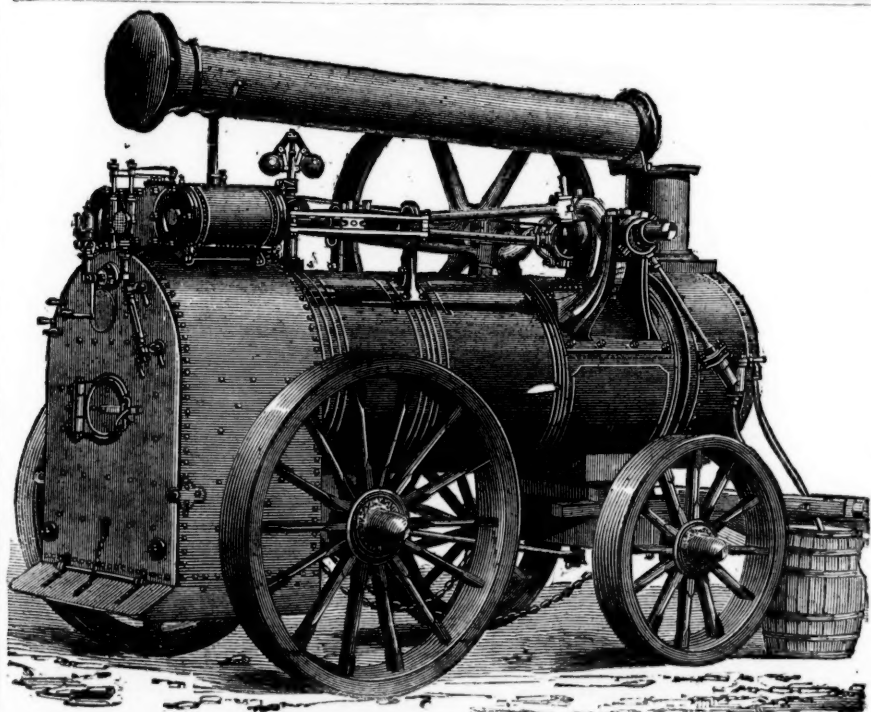
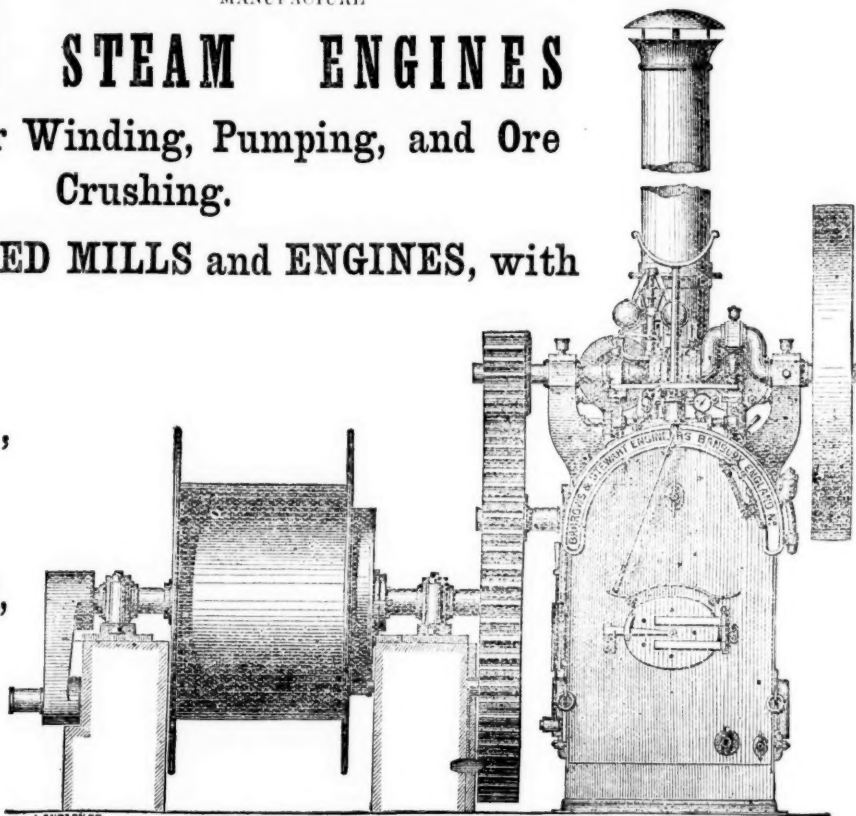
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In the year 1843, when Cornish mining was almost unknown to the general public, attention was first called to its advantages, when properly conducted, in the "Compendium of British Mining," commenced in 1837, and published in 1843, by Mr. J. Y. WATSON, F.G.S., author of "Gleanings among Mines and Miners," "Records of Ancient Mining," "Cornish Notes" (first series, 1852), "Cornish Notes" (second series, 1863), "The Progress of Mining," with Statistics of the Mining Interest, annually for 21 years, &c., &c. In the Compendium, published in 1843, Mr. WATSON was the first to recommend the system of a "division of small risks in several mines, ensuring the success in the aggregate," and Messrs. WATSON BROTHERS have always a selected list on hand. Perhaps at no former period in the annals of mining has there been more peculiar need of honest and experienced advice in regard to mines and shareholding than there is at present; and, from the lengthened experience of Messrs. WATSON BROTHERS, they are emboldened to offer, thus publicly, their best services to all connected with the mining interest.
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THE MINING SHARE LIST.

BRITISH DIVIDEND MINES.

| Shares. | Mines. | Paid. | Last Pr. | Clos. Pr. | Total divs. | Per share. | Last paid |
|---------|--|----------|----------|-------------|-------------|------------|------------|
| 1500 | Alderley Edge, c, Cheshire* | 10 0 0 | — | — | 11 16 8 | 0 5 0 | Oct. 1873 |
| 2000 | All-y-Crib, c, Cheshire* | 2 0 0 | — | — | 0 6 0 | 0 6 0 | Feb. 1873 |
| 3000 | Bamford, c, t, Devon* | 1 0 0 | — | — | 0 2 0 | 0 2 0 | June 1873 |
| 5000 | Blanc Caelan, c, t, Cardigan* (24 sh.) | 3 0 0 | — | — | 0 10 0 | 0 10 0 | — |
| 15000 | Boswell Down, c, t, St. Just* | 3 0 0 | — | — | 0 5 0 | 0 5 0 | Oct. 1871 |
| 200 | Botallack, c, t, St. Just* | 106 5 0 | 65 | 60 65 | 619 15 0 | 5 0 0 | Aug. 1872 |
| 500 | Bronfloyd, c, t, (23000 Deb. B. & P. Co.) | 100 0 0 | 35 | 30 35 | 110 0 0 | 2 0 0 | Jan. 1872 |
| 4000 | Brookwood, c, t, Buckfastleigh | 1 16 0 | — | — | 2 14 6 | 0 6 0 | Nov. 1873 |
| 3548 | Cargill, c, t, Newlyn | 4 16 11 | 1 1/2 | 1 1/2 | 4 16 3 | 0 12 6 | Oct. 1872 |
| 8400 | Cashwell, c, t, Cumberland* | 2 10 0 | — | — | 1 4 0 | 0 4 0 | Aug. 1872 |
| 1600 | Castle-an-Dinas, c, t, Col.umb* | 2 0 0 | — | — | 0 10 0 | 0 2 0 | July 1873 |
| 1000 | Carn Brea, c, t, Illogan* | 35 0 0 | 62 | 55 60 | 307 0 0 | 1 0 0 | Oct. 1873 |
| 4000 | Cath. & Jane, c, t, Penryn & Landreth | 5 0 0 | — | — | 0 7 6 | 0 7 6 | June 1873 |
| 2450 | Cock's Kitchen, c, t, Illogan* | 19 14 9 | 13 | 11 12 | 11 17 0 | 0 7 6 | June 1873 |
| 10240 | Devon Gt. Consols, c, t, Tavistock* | 0 12 0 | — | — | 116 10 0 | 12 0 0 | May 1872 |
| 4296 | Dolcoath, c, t, Camborne | 10 14 10 | 55 | 47 50 | 204 4 2 | 12 6 0 | Jan. 1874 |
| 10000 | East Ballewidden, c, t, Sancerre* | 1 0 0 | — | — | 0 2 6 | 0 5 0 | Nov. 1873 |
| 6144 | East Caradon, c, t, Cleer* | 2 14 6 | 1 1/2 | 1 1/2 | 14 19 0 | 0 2 0 | Oct. 1872 |
| 300 | East Darren, c, t, Cardiganshire | 32 0 0 | 10 | 8 1/2 9 1/2 | 218 10 0 | 1 0 0 | Sept. 1873 |
| 8400 | East Pool, c, t, Illogan | 0 9 9 | — | — | 13 11 3 | 0 2 6 | May 1873 |
| 5000 | Exmouth, c, t, Christow | 0 7 6 | — | — | 0 1 0 | 0 1 0 | May 1873 |
| 2500 | Foxdale, c, t, Isle of Man* | 25 0 0 | — | — | 0 13 0 | 0 10 0 | May 1872 |
| 3950 | Gawton, c, t, Tavistock | 2 10 0 | — | — | 0 13 0 | 0 10 0 | May 1872 |
| 40000 | Glasgow Carr, c, t, (30,000 £1 p., 10,000 15s. p.) | 4 0 0 | — | — | 0 4 10 | 0 1 0 | Oct. 1873 |
| 15000 | Great Laxey, c, t, Cardigan* | 4 0 0 | — | — | 16 11 0 | 10 0 0 | Oct. 1873 |
| 5000 | Great West Van, c, t, Cardigan* | 2 0 0 | — | — | 0 1 0 | 0 1 0 | Oct. 1873 |
| 5908 | Great Wheel Vor, c, t, Helston | 40 5 0 | 2 1/2 | 1 1/2 2 1/2 | 15 19 6 | 0 2 6 | June 1872 |
| 6400 | Green Hurth, c, t, Durham* | 0 6 0 | — | — | 1 4 0 | 0 4 0 | Nov. 1873 |
| 1024 | Herdoford, c, t, near Liskeard | 8 10 0 | 5 | 4 5 | 62 5 0 | 15 0 0 | Oct. 1872 |
| 18000 | Hingham Downs, c, t, Calstock* (21 sh.) | 1 0 0 | — | — | 4 3 0 | 0 5 0 | Dec. 1872 |
| 25000 | Killalee, c, t, Tipperary | 1 0 0 | — | — | 0 3 11 1/2 | 0 8 0 | Mar. 1873 |
| 400 | Lisburne, c, t, Cardiganshire | 18 15 0 | — | — | 559 10 0 | 1 0 0 | Sept. 1873 |
| 5120 | Lovell, c, t, Wendron | 0 10 0 | — | — | 0 16 0 | 0 4 0 | Aug. 1873 |
| 9000 | Minera Mining Co., c, t, Wrexham* | 5 0 0 | 30 | 30 32 1/2 | 63 5 8 | 4 0 0 | Oct. 1873 |
| 20000 | Mining Co. of Ireland, c, t, c, t* | 7 0 0 | — | — | 0 8 0 | 0 8 0 | June 1872 |
| 12000 | North Hendre, c, t, Wales | 2 10 0 | — | — | 0 10 0 | 0 2 6 | Nov. 1873 |
| 2000 | North Levant, c, t, St. Just | 10 17 0 | — | — | 4 13 0 | 0 12 0 | Sept. 1873 |
| 5694 | Pedn-an-drea, c, t, Redruth | 8 2 0 | 3 1/2 | 3 3 1/2 | 0 5 0 | 0 5 0 | Oct. 1871 |
| 5000 | Penrhall, c, t, St. Agnes | 3 0 0 | — | — | 3 3 0 | 0 2 0 | Jan. 1874 |
| 6000 | Penryn & Landreth, c, t, Illogan* | 11 7 6 | — | — | 0 10 0 | 0 2 6 | Nov. 1873 |
| 6000 | Phoenix, c, t, Linkinhorne | 4 3 4 | — | — | 39 19 10 | 0 4 0 | Nov. 1872 |
| 1772 | Pobber, c, t, St. Agnes | 15 0 0 | — | — | 1 12 6 | 0 5 0 | Mar. 1872 |
| 18000 | Prince Patrick, c, t, Holywell | 1 0 0 | — | — | 0 5 0 | 0 2 0 | Jan. 1874 |
| 1120 | Providence, c, t, Lelant (last call Dec. 73) | 12 16 7 | 8 1/2 | 7 8 | 104 12 6 | 10 0 0 | Sept. 1872 |
| 12000 | Roman Gravel, c, t, Salop* | 7 10 0 | 17 1/2 | 17 1/2 | 3 5 0 | 0 8 6 | Dec. 1872 |
| 10000 | Shelton, c, t, St. Austell | 1 0 0 | — | — | 0 1 0 | 0 1 0 | Feb. 1872 |
| 6000 | Slimeford Dressing, c, t, Calstock* | 1 0 0 | — | — | 0 1 1 | 0 1 1 | Sept. 1872 |
| 512 | South Caradon, c, t, Cleer | 1 5 0 | — | — | 71 1 0 | 2 0 0 | Nov. 1873 |
| 5000 | South Carr Brea, c, t, Illogan* | 11 7 6 | — | — | 1 1 0 | 0 2 6 | July 1873 |
| 6000 | South Darren, c, t, Cardigan* | 3 6 6 | — | — | 1 1 0 | 0 1 0 | Jan. 1870 |
| 242 | Spearhead, c, t, St. Just | 38 17 0 | — | — | 17 5 0 | 10 0 0 | June 1872 |
| 8771 | St. Just Amalgamated, c, t* | 3 10 0 | — | — | 0 9 0 | 0 4 0 | Nov. 1871 |
| 12000 | Tankerville, c, t, Salop* | 6 0 0 | — | — | 3 8 0 | 0 6 0 | Feb. 1873 |
| 25000 | Terrac, c, t, St. Austell* | 1 0 0 | — | — | 0 3 0 | 0 1 8 | Oct. 1872 |
| 6000 | Trenth, c, t, Pool, Illogan* | 9 0 0 | 42 1/2 | 38 40 | 46 3 6 | 1 0 0 | Oct. 1872 |
| 4000 | Trumpet Consols, c, t, Helston | 5 15 0 | — | — | 9 11 0 | 10 0 0 | Nov. 1872 |
| 15000 | Van, c, t, Llanidloes* | 1 0 0 | — | — | 11 17 0 | 0 15 0 | Dec. 1873 |
| 3000 | W. Chiverhall, c, t, Penryn & Landreth | 4 0 0 | — | — | 52 10 0 | 0 10 0 | June 1872 |
| 2048 | West Wheel Frances, c, t, Illogan | 27 3 9 | 12 | 10 11 | 3 12 6 | 0 6 0 | Oct. 1872 |
| 612 | Wheel Basset, c, t, Illogan* | 5 2 6 | 30 | 24 26 | 638 10 0 | 10 0 0 | Aug. 1872 |
| 4295 | Wheel Killy, c, t, St. Agnes | 5 4 6 | 10 | 9 9 1/2 | 11 1 6 | 0 6 0 | Nov. 1873 |
| 896 | Wheel Margaret, c, t, Uly Lelant | 13 17 6 | 3 | 2 1/2 2 1/2 | 82 2 8 | 10 0 0 | May 1872 |
| 10000 | Wheel Mary, c, t, St. Dennis* | 5 0 0 | — | — | 0 1 0 | 0 1 0 | Jan. 1873 |
| 1024 | Wheel Mary Ann, c, t, Menheniot | 10 0 0 | — | — | 74 5 0 | 0 2 6 | June 1872 |
| 80 | Wheel Wicks, c, t, St. Just | 70 0 0 | — | — | 522 10 0 | 4 0 0 | Aug. 1872 |
| 12000 | Wheel Russell, c, t, Camborne | 1 0 0 | — | — | 0 2 0 | 0 10 0 | June 1871 |
| 1356 | Wheel Seton, c, t, Camborne | 73 0 0 | 20 | 17 1/2 20 | 256 0 0 | 1 0 0 | Oct. 1873 |
| 15000 | Wheel Tregosa, c, t, Roche | 1 0 0 | — | — | 0 1 0 | 0 1 0 | Jan. 1873 |
| 10000 | Wheel Whispy, c, t, Warleggan* | 2 10 0 | — | — | 0 1 6 | 0 8 0 | May 1872 |
| 25000 | Wicklow, c, t, Wicklow | 2 10 0 | — | — | 52 9 0 | 0 2 6 | Mar. 1872 |

FOREIGN DIVIDEND MINES.

| Shares. | Mines. | Paid. | Last Pr. | Clos. Pr. | Total divs. | Per share. | Last paid |
|---------|--|--------|----------|-----------|--------------|------------|------------|
| 355000 | Alamillos, c, t, Spain* | 2 0 0 | — | — | 1 1 0 | 0 2 6 | Mar. 1873 |
| 10000 | Almaden, c, t, Spain* | 1 0 0 | — | — | 0 4 3 | 0 10 0 | May 1873 |
| 20000 | Australian, c, t, South Australia* | 7 7 6 | — | — | 0 11 0 | 0 2 0 | July 1873 |
| 10000 | Battle Mountain, c, t, (2240 part pd.) | 1 0 0 | — | — | 0 10 0 | 0 2 0 | Nov. 1872 |
| 15000 | Birdseye Creek, c, t, California* | 4 0 0 | — | — | 0 9 0 | 0 2 0 | July 1873 |
| 6000 | Bensberg, c, t, Germany* | 10 0 0 | — | — | 0 17 4 | 0 8 0 | July 1873 |
| 12280 | Burra Burra, c, t, So. Australia | 6 0 0 | — | — | 66 0 0 | 10 0 0 | Oct. 1872 |
| 2000 | Cape Copper Mining, c, t, So. Africa* | 7 0 0 | — | — | 14 15 0 | 0 10 0 | Dec. 1872 |
| 40000 | Cedar Creek, c, t, California* | 5 0 0 | — | — | 0 5 0 | 0 2 6 | June 1873 |
| 30000 | Central American Association* | 0 15 0 | — | — | 0 6 0 | 0 10 0 | July 1869 |
| 1500 | Chicago, c, t, Utah* | 7 0 0 | — | — | 0 16 0 | 0 4 0 | Sept. 1873 |
| 21000 | Colorado Terrible, c, t, Colorado* | 1 0 0 | — | — | 0 8 0 | 0 2 0 | Oct. 1871 |
| 76162 | Don Pedro Norte del Rey* | 0 16 0 | — | — | 2 9 0 | 0 6 0 | Mar. 1872 |
| 23500 | Eberhardt and Aurora, c, t, Nevada* | 10 0 0 | — | — | 1 0 0 | 0 10 0 | June 1871 |
| 2352 | El Dorado, c, t, Nova Scotia* | 10 0 0 | — | — | 2 5 0 | 0 15 0 | June 1873 |
| 60000 | Emma, c, t, Utah (25,000 fully pd.) | 20 0 0 | — | — | 3 12 0 | 0 6 0 | Dec. 1872 |
| 70000 | English and Australian, c, t, Aust. | 2 10 0 | — | — | 2 7 8 | 0 6 0 | Mar. 1873 |
| 15800 | Ferguson, c, t, California* | 2 0 0 | — | — | 0 3 0 | 0 3 0 | April 1872 |
| 20000 | Flintstaff, c, t, Utah* | 10 0 0 | — | — | 4 2 0 | 0 5 0 | July 1873 |
| 25000 | Fortuna, c, t, Spain* | 2 0 0 | — | — | 3 19 4 | 0 5 0 | Dec. 1873 |
| 30000 | Gold Run, c, t, Spain* | 1 0 0 | — | — | 0 2 4 | 0 4 0 | Oct. 1872 |
| 68000 | Kapunda Mining Co., c, t, Australia* | 1 30 0 | — | — | 0 2 4 | 0 6 0 | June 1873 |
| 20000 | Last Chance, c, t, Utah* | 5 0 0 | — | — | 0 11 0 | 0 2 0 | July 1873 |
| 15000 | Linares, c, t, Spain* | 3 0 0 | — | — | 14 3 4 | 0 2 6 | Dec. 1873 |
| 7837 | Lusitania, c, t, Portugal* (45 shares) | 3 0 0 | — | — | 11 11 6 | 0 1 6 | Mar. 1873 |
| 15000 | Mammoth Copperopolis of Utah, c, t | 10 0 0 | — | — | 0 5 0 | 0 5 0 | Dec. 1872 |
| 6000 | Mountain Chief, c, t, Utah* | 10 0 0 | — | — | 0 4 0 | 0 3 0 | Jan. 1873 |
| 18000 | Prussian Mining and Ironworks, c, t, t | 30 0 0 | — | — | 6 0 0 | 3 0 0 | July 1873 |
| 10000 | Pontchartré, c, t, France* | 20 0 0 | — | — | 14 18 11 | 1 3 0 | Dec. 1873 |
| 100000 | Port Phillip, c, t, Clunes* | 1 0 0 | — | — | 1 7 6 | 0 10 0 | Jan. 1873 |
| 44000 | Richmond Consols, c, t, Nevada* | 5 0 0 | — | — | 1 7 6 | 0 10 0 | Jan. 1873 |
| 120000 | Scottish Australian Mining Co., t, t | 1 0 0 | — | — | 12 per cent. | — | Nov. 1873 |
| 112500 | Sierra Buttes, c, t, California* | 2 0 0 | — | — | 1 8 0 | 0 2 0 | Dec. 1873 |
| 60000 | South Aurora, c, t, Nevada* | 5 0 0 | — | — | 0 14 2 | 0 2 0 | Nov. 1873 |
| 15000 | Sweetland Creek, c, t, California* | 4 0 0 | — | — | 2 8 0 | 0 5 0 | Dec. 1873 |
| 20000 | Telma, c, t, (6000 sh. are £5 f. pd.) | 3 0 0 | — | — | 0 5 0 | 0 2 6 | Nov. 1872 |
| 600 | Westphalian, c, t, Prussia* | 20 0 0 | — | — | 26 10 0 | 5 0 0 | Dec. 1872 |

NON-DIVIDEND FOREIGN MINES.

| Shares. | Mines. | Paid. | Last Pr. | Clos. Pr. | Last Call. | |
|---------|--|--------|----------|-----------|-------------|---------------|
| 60000 | Anglo-Argentine, <i>g, s, *</i> (15 per cent. Preference)..... | 1 0 0 | ... | 36... | 1/4 3/8 | ...Fully pd. |
| 20000 | Anglo-Australian, <i>g, s, Victoria*</i> | 2 10 0 | ... | ... | ... | ...Sept. 1872 |
| 20000 | Australian United, <i>g, s, Victoria*</i> | 2 10 0 | ... | 36... | 3/8 3/8 | ...Fully pd. |
| 3000 | Bellavista, <i>s, Peru</i> (210 shares)..... | 9 0 0 | ... | ... | ... | ...Jan. 1873 |
| 30000 | Blue Tent, <i>hyd, c, California</i> | 5 0 0 | ... | 5 1/2 | 5 1/2 | ...Fully pd. |
| 60000 | Braganza, <i>g, Brazil*</i> | 0 15 0 | ... | ... | ... | ...Oct. 1870 |
| 12000 | Camp Floyd, <i>s, Utah*</i> | 10 0 0 | ... | ... | ... | ...Fully pd. |
| 35000 | Cesena Sulphur Company, Romagna, Italy*..... | 10 0 0 | ... | ... | ... | ...Fully pd. |
| 60152 | Chontales, <i>g, s, Nicaragua*</i> (and 12,842 of £1 15s.)..... | 2 0 0 | ... | 1 | 3/4 1 | ...Fully pd. |
| 6000 | Clifton, <i>s, Colorado*</i> | 5 0 0 | ... | ... | ... | ...Feb. 1872 |
| 10000 | Crescent, <i>g, Plumas County, California*</i> | 10 0 0 | ... | ... | ... | ...Fully pd. |
| 100000 | Culaba, <i>g, Minas Geraes, Brazil*</i> | 0 17 8 | ... | ... | ... | ...Jan. 1873 |
| 10000 | Douglas, <i>s, Georgetown, Col.</i> | 5 0 0 | ... | ... | ... | ...Fully pd. |
| 7500 | East Sheboygan Preference* (40,000 ordinary shares)..... | 2 0 0 | ... | ... | ... | ...Fully pd. |
| 35000 | Excelsior Hydraulic Gold Washing Co., California*..... | 6 0 0 | ... | ... | ... | ...Dec. 1871 |
| 60000 | Excelsior, <i>g, s, California*</i> | 1 0 0 | ... | ... | ... | ...Fully pd. |
| 55000 | Frontino and Bolivia, <i>g, New Granada*</i> | 2 0 0 | ... | 36... | 3/4 3/8 | ...Fully pd. |
| 50000 | General Brazilian, <i>g</i> | 1 0 0 | ... | ... | ... | ...Fully pd. |
| 10000 | Goetz Tunnel Co., Georgetown, Col. | 7 0 0 | ... | ... | ... | ...Jan. 1873 |
| 40000 | Holcombe Valley, <i>g, s, California</i> | 1 0 0 | ... | 1 | 3/4 1 | ...Fully pd. |
| 6000 | Hornachos, <i>s, s, l, (210 shares)</i> | 7 0 0 | ... | ... | ... | ...Jan. 1874 |
| 10000 | Hudson, <i>g, California*</i> | 3 0 0 | ... | ... | ... | ...April 1873 |
| 20000 | Imperial Brazilian Collieries, Brazil*..... | 5 0 0 | ... | ... | ... | ...Fully pd. |
| 20000 | I. X. L., <i>g, s, California*</i> | 5 0 0 | ... | ... | ... | ...Fully pd. |
| 50000 | Javali, <i>g, Nicaragua*</i> | 2 0 0 | ... | 1/2... | 1/4 3/8 | ...Fully pd. |
| 11000 | Kansas, <i>g, Colorado*</i> | 5 0 0 | ... | ... | ... | ...Aug. 1873 |
| 12000 | Lanestosa, <i>g, s, c, t, Viscaya, Spain (22 shares)</i> | 1 7 6 | ... | ... | ... | ...Fully pd. |
| 150000 | London and California, <i>g, s, *</i> | 2 0 0 | ... | ... | ... | ...Fully pd. |
| 75000 | Malabar, <i>g, Colombia*</i> (65000 issued)..... | 1 0 0 | ... | 7... | 3/8 3/8 | ...Fully pd. |
| 4000 | Malaga, <i>l, Spain*</i> | 10 0 0 | ... | ... | ... | ...Fully pd. |
| 25000 | Malpaso, <i>g, Colombia*</i> | 1 0 0 | ... | 1 1/2... | 1 1/2 | ...Fully pd. |
| 12000 | Menzenberg, <i>c, Honnef, Germany*</i> | 5 8 0 | ... | ... | ... | ...Fully pd. |
| 14000 | Montague & Waverley Gold Quartz Crushing Co., * N. Scot. | 2 0 0 | ... | ... | ... | ...Allotment |
| 6000 | Monte Loretto, <i>g, c, Italy*</i> | 5 0 0 | ... | ... | ... | ...Fully pd. |
| 15000 | New Pacific, <i>g, Nevada*</i> | 7 0 0 | ... | 1/2... | 3/4 3/8 | ...Fully pd. |
| 55000 | New Quebrada, <i>c, Venezuela*</i> | 5 0 0 | ... | 4 1/2... | 3 1/2 4 1/2 | ...Fully pd. |
| 50000 | New Rosario, <i>s, Mexico*</i> | 1 0 0 | ... | 1 1/2 | 3/4 1 | ...Fully pd. |
| 20000 | New Zealand Kumanga, <i>g, Coronado*</i> | 5 0 0 | ... | ... | ... | ...Fully pd. |
| 10000 | Newfoundland, <i>s, *</i> | 10 0 0 | ... | ... | ... | ...Fully pd. |
| 20000 | North American, <i>g, s, *</i> | 4 0 0 | ... | ... | ... | ...Fully pd. |
| 50000 | Panuelillo, <i>c, Chili*</i> | 4 0 0 | ... | 2 1/2... | 2 3/4 | ...Fully pd. |
| 50000 | Pedernales, <i>g, g</i> | | | | | |